

Los Angeles

ADD 12 mos.

Public Library



SCIENCE AND INDUSTRY

# Manufacturers Record

Reg. U. S. Patent Office

REHENCE  
NOT LOAN

**\$9,500,000,000**



The annual value of the South's manufactured goods has reached the stupendous figure of \$9,500,000,000. Industrial enterprises are operating at the highest point since 1929.

New plants in widely diversified fields are being established in every Southern state. Last year more than \$322,000,000 was invested in industrial expansion.

Compared with the depression figures of 1933, there has been an increase of 41 per cent in the value of what the South makes, with 51 per cent increase in the amount spent for materials.

Any consideration of these huge figures will impress upon the reader the tremendous buying power of the South of today.

A P R I L , 1 9 3 7

MORE SOUTHERN PAPER MILLS • SOUTH'S STEEL INDUSTRY ACTIVE AND WORK BEING RUSHED ON NEW PLANTS • COTTON MANUFACTURING NEAR PEAK • TRUCK TRANSPORTATION GAINS IN SOUTH

**TWO-IN-ONE!** In Colquitt County, Ga., this "Caterpillar" Diesel Auto Patrol cuts the number of rounds in half—supplementing its own blade with that of the No. 22 Grader it pulls.



# GOOD ROADS KEPT GOOD... *at low cost!*



*Rebuilding and maintaining oiled streets, this "Caterpillar" Diesel Auto Patrol finishes more miles per day—with fewer rounds per mile.*

IT'S GOOD BUSINESS to keep farm-to-market roads in first-class condition—because good roads bring good business to the whole community. But road maintenance must be organized on a low-cost basis—for almost every county is faced with the problem of limited budgets for this important duty.

County after county has solved this problem by adopting "Caterpillar" Road Machinery. The versatile Auto Patrol is built for many jobs—it scarifies, ditches, reshapes and resurfaces—works on both town and country roads—all on 10 to 15 cents an hour for fuel and lubrication!

Your "Caterpillar" dealer can show you cost-cutting records on jobs similar to those in your road program. Let him put a machine to work, and convince yourself that it can save you money.

# CATERPILLAR TRACTOR CO. PEORIA, ILL.



WORLD'S LARGEST MANUFACTURER OF DIESEL ENGINES  
TRACK-TYPE TRACTORS AND ROAD MACHINERY

# TABLE OF CONTENTS

APRIL  
1937

Volume CVI No. 4

## MANUFACTURERS RECORD

Devoted to the Upbuilding of the Nation Through the Development of the South and Southwest as the Nation's Greatest Material Asset

*Published Monthly*

by the

MANUFACTURERS RECORD  
PUBLISHING CO.

Frank Gould, President

Main Office: Manufacturers Record Building, Commerce and Water Streets, Baltimore, Md. Phone: Plaza 7080-1.

Branch Offices:

New York—11 W. 42nd St. Phone: Longacre 5-7180.

Chicago—28 East Jackson Blvd., Room 1510

Phone: Harrison 5867

Cleveland, Ohio—1745 Wymore Ave.

Phone: Glenville 2275

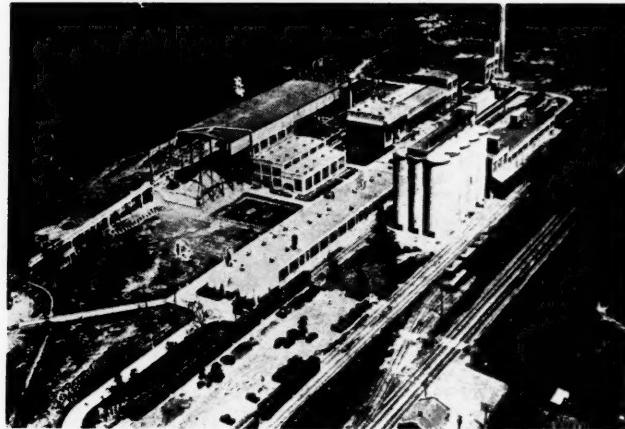
Subscription Rate: \$2.00 a year (in advance). Single copies, 25c; back numbers, one to six months, 50c each; over six months, \$1.00. Combination rate for Manufacturers Record and Daily Construction Bulletin, \$11.00 a year.

Subscribers are asked to notify us of change in address to avoid delay in service.

PUBLISHERS DAILY CONSTRUCTION BULLETIN AND  
BLUE BOOK OF SOUTHERN PROGRESS

Member  
A.B.C.

APRIL NINETEEN THIRTY-SEVEN



Alpha Portland Cement Co., Birmingham, Ala., one of largest in the world and one of five cement plants located in the Birmingham District. Photo courtesy Birmingham Chamber of Commerce.

### EDITORIALS

\$9,500,000,000 .....	Cover Page
A Menace to Progress .....	29
Important Facts .....	30
Taxes Restrict Employment .....	30
Clarence R. Marchant .....	30
A Short Cut to Dictatorship? .....	31

### NEWS and FEATURE ARTICLES

More Southern Paper Mills Proposed and Under Way .....	32
\$9,500,000,000 Value South's Manufactures .....	35
South's Steel Industry .....	36
Bethlehem Adds to Maryland Plant Facilities .....	37
Cotton Manufacturing Near Peak .....	40
New Cellulose Extraction Process .....	40
More Industries for the South .....	41
Margarine .....	42
Truck Transportation Gains in the South. By Arthur C. Butler	43
Employment and Wages Increase in the South .....	44
National Rivers and Harbors Congress .....	44
Obsolete Equipment .....	46
\$190,034,000 Construction Awards First Quarter .....	48
Representative Projects in the South Last Month .....	50
Southern Forest Resources .....	54
Industrial Expansion in East Mississippi .....	72
Gainesville, Ga., Building Bigger and Better City .....	74
Going After Industries .....	76
\$200,000 Prize Contest on Arc Welding Practices .....	76
New Mechanical Rubber Goods Factory .....	82
\$9,000,000 Canal Proposed for Central Florida .....	82
Foundry Convention and Show .....	86

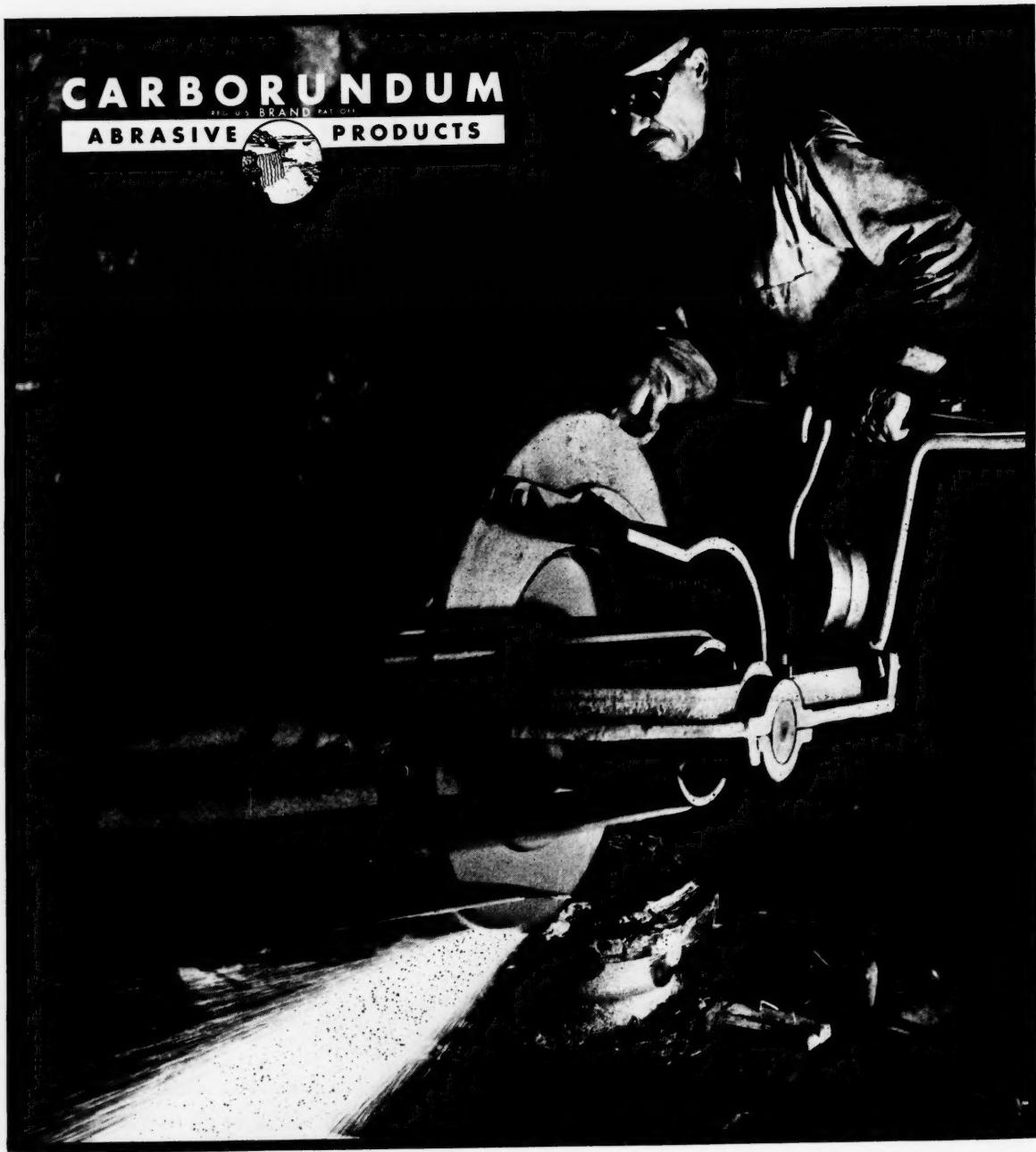
*Cover page illustration—"Iron Makers" at night.  
Furnace Scene at Birmingham, Ala. Photo courtesy  
Birmingham Chamber of Commerce.*

### SPECIAL DEPARTMENTS

Iron, Steel and Metal Markets .....	52
Lumber News of the Month .....	54
Good Roads and Motor Transport .....	56
Equipment, New and improved .....	58
Financial News .....	60
Industrial News .....	64
Trade Literature .....	84
Index for Buyers .....	92
Index of Advertisers .....	94

*It will pay you to visit the*

# CARBORUNDUM EXHIBIT



**CARBORUNDUM**  
U.S. BRAND PAT'D  
**ABRASIVE PRODUCTS**

# • Manufacturers Record •

## A MENACE TO PROGRESS

SIT-down strikes present the gravest crisis this country has seen in many years. They are grave in their effect on the relationship between employer and employee; grave in the imminent prospect of widespread disorder, but gravest of all in their expression of lawlessness.

No thinking person will deny labor the right to seek employment on its own terms, or to bargain collectively or individually for better wages and better working conditions, but we do deny labor, or any other group, the right to break the law.

Sit-down strikes are flagrant violations of the law. Two large enterprises of an important and prosperous industry have been forced to cease operations because of the seizure of their property by striking employees. Twice the Federal Court ordered the arrest of those illegally holding the plants. Twice the Court order was ignored and openly defied, with no effort made to enforce it.

Millions of dollars in wages and output have been lost, and to what end? Were the strikes called to prevent sweat shop labor conditions, unbearable working hours and starvation pay? Apparently not. The only emphasized point at issue was the recognition of one union as the sole bargaining agency for all employees. The need for only one bargaining agency for all employees is obscure unless it be to give one man and the group he heads control of industry and greater power in politics.

The whole situation has been so unnecessary. Orderly methods for solving the problem, provided there was a problem, were far from being exhausted. Not even the new machinery provided for settling labor disputes through the Wagner Labor Relations Act has been used. It almost seems as though the illegal course was preferred.

It is inconceivable that labor should continue to be misled by tactics which not only create public ill-will, but cost labor very heavily in the final financial score.

The attitude of the administration in Washington toward sit-down strikes is hard to understand. When a word from President Roosevelt would have done so much to solve the problem, he has been strangely silent, with the resulting impression that government sym-

pathies have been on the side of the law breakers.

It is unpleasant to contemplate what may happen if the situation continues. When law enforcement breaks down the resulting confusion and danger to the safeguards which protect society, jeopardize our very national existence.

A new theory has been expounded by two aspirants to the proposed vacancies in the Supreme Court, which states that a worker has a vested, proprietary interest in his job. But even the advocates of this theory, if they are fair, will find it difficult to answer the question of what becomes of the rights of ownership of those who have invested their savings, and the millions of stockholders, including not only the entrepreneur of vast wealth, but those in far larger numbers, the small shareholder, the average man on the street, the widow and the aged. What becomes of their part of the ownership of property if it can be seized and illegally held without recourse?

The problem affects the South. How will the South meet it? Textiles have been spoken of as next in line for unionization by the CIO. A Southern attack seems likely. Will the situation be met adequately and promptly by constituted authority? Certainly there can be no justifiable compromise with law breakers.

The MANUFACTURERS RECORD yields to no one in its recognition of the rights of labor and the indispensable part it has in our progress. We have always advocated the highest possible wage for the deserving worker. We recognize the fact that when employed by large industries the average worker must of necessity be inarticulate. It is difficult for him to have personal contact with management. He needs adequate representation which will have entree to the heads of industry for bargaining or for the discussion of real or imaginary wrongs, but when labor, as we have said many times, allows itself to be used for political purposes, in which numbers count for more than character of work, and especially, when labor permits itself to be placed in the position of law breakers it defeats its objective.

Labor is unjust to itself, as well as to the country when it refuses to be answerable to the law. Labor unions should incorporate and accept their rightful share of legal and social responsibility.

## IMPORTANT FACTS

**T**HREE are two important facts in connection with the industrial situation as affecting both employer and employee, which should be exceedingly gratifying.

As we are pointing out elsewhere, in the South the average wage per hour for all industries has increased 4.5 per cent as compared with an increase of 2 per cent for the country as a whole, and this increase in the Southern states has narrowed the differential between Southern wages and those paid elsewhere to a point where it is less than ever before. For example, in 1933 the difference was 33.5 per cent, and this has now been changed to 21.9 per cent.

Employment too has increased more rapidly in the South than in any other part of the country due to the increase of business. The Southern textile industry for example has been operating recently at the highest point of production since the depression. Some mills have been running two 40-hour shifts per week.

Activity is general. A three week's journey through the Eastern South, with visits to half a dozen or more principal cities as far as Savannah on the East and Birmingham on the West, showed mills and factories working at top speed. In many cases it was said no more orders for early delivery could be taken, and employers, in view of the condition of affairs, were free in their expressions of amazement that there should be at the present time, under better conditions for workers than has existed for years, any unrest or agitation with a threat of strikes and disarrangement of production that would bring about confusion and loss to everybody.

There is no question of the fact that the introduction of huge sums of money into the channels of trade have brought about pronounced activity. It is apparent on every hand. It would seem to be a time for the South and those interested in its progress to make known to a greater extent than they have been able to do in recent years, the great and unparalleled advantages possessed by this section for a wider diversity of manufacturing, the opportunity for the profitable investment of home capital in the creation of new enterprise, or in other words, to build now upon a recognized foundation of unparalleled resources for the production of new wealth.

---

## TAXES RESTRICT EMPLOYMENT

**T**HE 1936 Revenue Act through its heavy taxes on both earnings and undistributed surplus, is having an adverse effect on employment.

Excessive taxes, on either earnings or undistributed surplus, require that a relatively large portion of a company's assets must be kept in cash or easily liquidated form. This, a great many companies cannot afford to do, with the result that they are forced to liquidate, more often than not at a loss, part of their plant, inventory, or some other capital asset.

Even in more fortunate cases, the present Revenue Act forces the distribution of surplus that might otherwise be invested in improving plant and equipment, increased employment, expansion and a reserve for less prosperous times.

It has been pointed out that under the provisions of the present Revenue Act the investor is largely stopped from liquidating old investments and venturing into new. Should an old investment prove successful the government dips deeply into his capital. The tax on undistributed profits prevents a new and struggling enterprise from accumulating reserves and building up strength. Capital Gains and Surplus Taxes have been described as "Acts to prevent young men from obtaining capital with which to go into business; to keep small industries from expanding; to hold established industries in the congested East and prevent them from seeking more economical environment in the South."

There is ample evidence that this is so, particularly in the case of the Capital Gains Tax which in effect, is a tax on enterprise. Individual states have in trying it over a period of years lost industries, while other states without a comparable tax gained them.

The National Economy League several months ago, comparing the states of Massachusetts and Pennsylvania, pointed out that in twelve years ending in 1932, industrial plants in Massachusetts decreased 14%. In 1936, a \$4,000,000 tax burden in the shape of a machinery tax was abolished and since that time 400 new enterprises have begun operation in the state, employing the idle and creating new wealth. Pennsylvania, on the other hand, without the taxes Massachusetts formerly had was gaining industries. Pennsylvania levied a Capital Tax and a tax on net earnings and since 1933, 500 factories have either moved or gone out of business with a consequent loss to wage earners and the State.

It was generally expected that the 1936 Revenue Act would be revised at the beginning of this year but so far no move has been made to correct its very apparent evils.

---

## CLARENCE R. MARCHANT

**C**LARENCE R. MARCHANT passed away Easter morning at his residence in Baltimore. Although he had been unwell for several months, it was thought he was on the road to recovery. His death, therefore, came as a distressing shock.

Associated with the MANUFACTURERS RECORD from early youth, in fact almost from the beginning of the paper when he joined its business staff, he saw in advertising one of the great motivating forces of industry, and his study of it throughout his life was painstaking and thorough. He presented it always with the earnestness of profound conviction.

There has gone a gentleman of the old school, whose definiteness of character and constancy of purpose have left an indelible impression and a great void in the hearts and lives of his associates.

# A SHORT CUT TO DICTATORSHIP?

No more radical step has been taken by the present Administration than the proposal by President Roosevelt to reorganize the Supreme Court through Congressional legislation rather than through Constitutional amendment. "Stripped of non-essentials," says the Savannah News, "it comes down to this: President Roosevelt has demanded that Congress grant him the authority to pack the Supreme Court." It strikes at the very foundation of the Federal Government with its three independent branches—Legislative, Executive and Judicial. Congress is supposed to make the laws, the executive to see they are carried out, and the judiciary to pass upon their legality and guard the charter of our national existence to preserve the rights of citizens. The framers of the Constitution, with prophetic vision, placed these checks and balances in the function of the Federal Government to thwart the usurpation of power by any division of government, group or individual.

To change the rules of government as prescribed in the Constitution, an orderly procedure is clearly defined. Under Mr. Roosevelt's proposal there is no point in having either a Supreme Court, in the sense we know it, nor even a Constitution. If carried to its logical conclusion, it would only be necessary, in case of doubtful legislation, to look far enough for the right judges. Interpretation of the Constitution in this light would be so broad as to make it absolutely worthless.

*In asking for an expression of opinion from a number of business leaders picked at random, the MANUFACTURERS RECORD received the following replies:*

**H. C. STOCKHAM**, President, Stockham Pipe Fitting Co., Birmingham, Ala.

"I am opposed to tampering with the Supreme Court in the manner proposed. But, who am I to have an opinion? I am only the President of a concern employing thirteen hundred, with a record of meeting the payroll every Saturday for thirty-three years.

"If we still had a representative form of government, the proposal would undoubtedly be defeated. But not enough of our Senators and Representatives dare to vote their convictions. They will vote to pack the Supreme Court because they dare not oppose the President.

"If that is not a dictatorship, it certainly has that appearance."

**ART J. DYER**, President, Nashville Bridge Co., Nashville, Tenn.

"We are certainly opposed to any tampering or control of the Judiciary Division of the United States by any other division or person.

"We are opposed to any control or influence of Congress by the Administration.

"Our only hope of continuation of a Republican form of government is by a strict observance of the Constitution as developed by its framers."

**GEORGE SEALEY**, President, Galveston Wharf Company, Galveston, Texas

"Neither rules nor umpire were ever changed in Big League Games just to please those rooting for the home team. The throwing of cushions or soda pop bottles at the umpire never won a game.

There is no question of partisan politics in opposition to the President's proposed short cut to pack the Supreme Court by having Congress pass legislation to increase the membership. Men in all political groups have voiced their objection to such a course. Some of the most effective opposition has come from leading Democrats and liberals. Senator Glass of Virginia, Connally of Texas, George of Georgia, Clark of Missouri, Bailey of North Carolina, and other Democratic leaders of the country; such liberals as Senator Wheeler, Democrat of Montana, Hiram Johnson of California, Borah of Idaho, and others of equal prominence are against the plan. Raymond Moley, President Roosevelt's former right-hand New Dealer, has denounced the proposal to pack the Supreme Court and says a Constitutional amendment should be the means of enlarging the Federal power to deal with economic problems.

Turning to the representative lawyers of the nation, the American Bar Association in a poll of its membership reports 16,132 to 2,563 against President Roosevelt's proposal to reorganize the Supreme Court—A 6 to 1 vote of the leaders in the legal profession of the United States. In the solid Democratic South, the vote of the lawyers in this Bar Association poll is 5 to 1 against the proposal to reconstruct the Supreme Court through an Act of Congress; 3,652 voting against and 724 for the proposal.

nor changed the rules thereof. If rules of the game are to be changed, let such change be made without passion or prejudice, and by only those established rules already laid down for such a procedure. If rules of the game are to be changed, they will be made in due course, in an orderly manner, and not over-night. 'Rome was not built in a day.'

**G. E. REYNOLDS**, Vice-President, Reynolds Bros. Lumber Co., Albany, Ga.

"Aside from the danger in the undemocratic idea of the Congress making such changes without submitting to the electorate, it is distressing to know that a president would want such authority, especially in view of the policies advocated by the present incumbent."

**W. H. MASON**, Vice-President, Masonite Corporation, Laurel, Miss.

"I am very much opposed to the President's demand that the Supreme Court be enlarged through an act of Congress. There is no emergency now and such a radical change in our Government will establish a very dangerous precedent. I listened carefully to the President's arguments on the subject and it is evident that he wants to change the Court because it does not always agree with his views. The Court was established as a check on the executive and legislative branches of the government. It has functioned admirably for about one hundred and fifty years, and is our strongest safeguard against a dictatorship."

**E. L. KURTH** (President, Southern Pine Association), Vice-President & General Manager, Angelina County Lumber Company, Kelty, Texas

"I have the deepest conviction that the proposed legislation of enlarging the Supreme Court through an act of Congress, rather than by a change through Constitutional amendment, is un-American, unwise and un-Democratic. The only way that such legislation should be handled is by giving the people of our country an opportunity to vote on it through a Constitutional amendment.

"It is my further opinion that should President Roosevelt have his way with Congress in this matter that our form of government would be changed without the consent of the governed, and to place autocratic power in the hands of the executive department would ultimately destroy our present democratic form of Government."

**FITZGERALD HALL**, President, Nashville, Chattanooga & St. Louis Railroad, Nashville, Tenn.

"The real issue in connection with the President's recommendation to the Congress about the personnel of the United States Supreme Court was definitely clarified by the President himself on March 9th when he stated that, if the Congress would give him the power, he would . . . 'appoint Justices who will not undertake to override the judgment of the Congress on legislative policy' . . . This clearly means that the President proposes to appoint to the

*(Continued on page 80)*

# MORE SOUTHERN PAPER MILLS PROPOSED AND UNDER WAY

PAPER mill construction continued to dominate the industrial field last month as the International Paper and Power Co., through its president, R. J. Cullen, placed an order with Beloit Iron Works for two specially designed, high speed, wide Fourdrinier machines to be installed in a new Southern pulp and paper plant, the location of which is yet to be announced.

The plant is to have a capacity of 220,000 tons of kraft paper yearly and is in addition to the 200,000-ton \$8,000,000 kraft board development of its subsidiary, the Southern Kraft Corporation, now being built at Georgetown, S. C., and scheduled for completion in October. Fresh water for this project will be brought 10 miles from the Black River through a line now under construction. Engineering and construction for both units are being handled by the corporation's own forces.

These plants are two of 14, which, within a little over a year, have been proposed or started in the South as the result of the phenomenal expansion of the paper and board manufacturing industry. In several instances additions to the new plants have either been definitely announced and started or proposed before actual construction of the first units was completed.

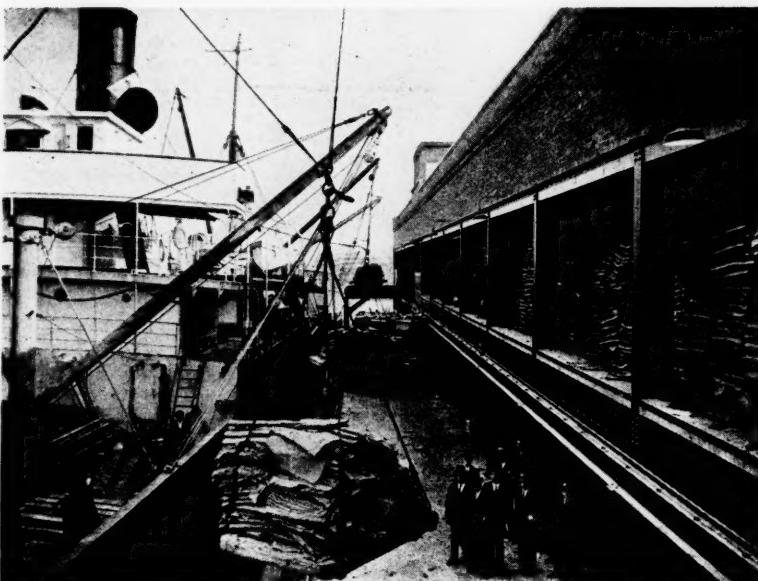
## First Southern Pulp Shipped North

A second unit is well under way and excavation has been started for a third unit at the Union Bag and Paper Company's Savannah plant, which so far represents a \$11,000,000 investment. Merritt-Chapman & Scott Corp. is the contractor and George F. Hardy, Engineer, both of New York. The first unit was dedicated last Fall, and the first shipment of 4200 tons of Southern woodpulp was made from this mill on March 22 to the company's Hudson Falls, N. Y., plant. This is the initial step by the Union Bag and Paper Company to supply its North-

ern mills with Southern pine pulp to take the place of imported pulp. J. H. Allen, vice president of the company and director of the Savannah plant, estimates a saving of \$20 a ton over the price of foreign pulp and as the Hudson Falls plant consumes approximately 30,000 tons of pulp a year, it will mean an annual saving of \$600,000. The present capacity of the Savannah plant is 150 tons of kraft paper and 180 tons of pulp a day and when the two additional units are completed early in October its production will be around 650 tons of paper and 750 tons of pulp a day. The bag making unit now in operation has a capacity of 12,000,000 bags a day which will be increased when the new additions are completed.

All of these products are made from Southern pine pulpwood secured from

Loading First Shipment North of pine pulp from Union Bag & Paper Corporation, Savannah, Ga.

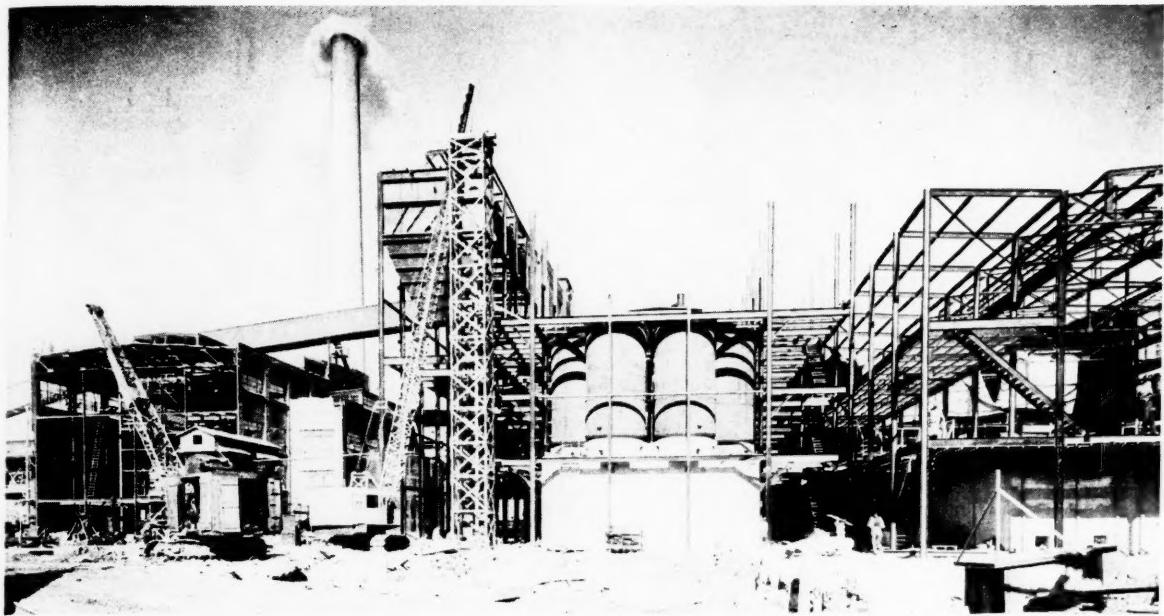


**\$85,000,000 Being Invested in 14 Projects, Including Two Newsprint Mills—First Mill Completed Makes Initial Shipment of Southern Pine Pulp to North**

## New Pulp and Paper Mills

14 Projects With Annual Capacity of 1,400,000 Tons

Location	Daily Capacity	Estimated Tons	Cost
ARKANSAS			
Crossett Paper Mills, Crossett, nearing completion .....	150	\$7,000,000	
FLORIDA			
Kraft Corporation of America, Fernandina, under way..	350	7,000,000	
St. Joe Paper Co., Port St. Joe, contract let .....	350	6,800,000	
GEORGIA			
Union Bag and Paper Corp., Savannah. One unit completed, two additional units under way .....	750	11,000,000	
Brunswick Pulp and Paper Co., Brunswick. Under way	150	7,000,000	
NORTH CAROLINA			
Kieckhefer Container Corp., Plymouth Excavation started	200	7,000,000	
SOUTH CAROLINA			
Southern Kraft Corporation, Georgetown. Under way	550	9,000,000	
West Virginia Pulp and Paper Co., Charleston. Near completion ...	300	5,000,000	
TEXAS			
Champion Paper and Fibre Co., Houston. About completed .....	200	3,500,000	
Probable addition .....	...	3,000,000	
Southland Paper Mills, Inc. Surveying for site in East Texas. (Newsprint) .....	...	5,000,000	
VIRGINIA			
Chesapeake-Camp Corp., Franklin. Under way .....	200	3,500,000	
SOUTH			
Southern Kraft Corp., site to be announced .....	600	9,000,000	
National Container Corp., proposed .....	...	3,275,000	
Newsprint mill, name and location to be announced .....	...	.....	



forests in Georgia and South Carolina. The company has leased a large acreage of pine lands which are being worked under forest protection and conservation methods to insure future supplies.

#### Rushing Work on Other Mills

Within a few weeks the first kraft paper will be turned out by the new \$4,000,000 mill at Crossett, Ark., by the Crossett Paper Mills, a division of the Cros-

ginia Pulp and Paper plant now well along toward completion at Charleston, S. C., where manufacturing operations will probably be started by July 1. Morton C. Tuttle Co., Boston, is the contractor.

In North Carolina at Plymouth, the Kieckhefer Container Co. is going forward with a pulp and paper plant to cost \$7,000,000. Excavation has been started for parts of the buildings and sidings have been completed by both the Atlantic Coast Line and Norfolk-Southern Rail-



Beginning Construction of the 3rd Unit of the Savannah Plant of the Union Bag and Paper Corporation.

sett Lumber Company. Hardy S. Ferguson Co., New York, engineers, and Rust Engineering Co., Pittsburgh, contractor.

Reports persist of additions to the new \$3,500,000 Champion Paper and Fibre plant at Houston, Texas, of which Morton C. Tuttle Co., Boston, is the contractor and J. E. Sirrine & Co., Greenville, S. C., engineers, and to the \$5,000,000 West Vir-

Construction of Tanks and Steel Work, Unit No. 2 of Union Bag and Paper Plant, Savannah.

road. Upon completion of the trackage being built to the wood yard by the general contractor, James Stewart & Co., New York, it is expected that actual building operations will begin. W. S. Lee Engineering Co., Charlotte, is engineer.

Franklin, Va., is the scene of preliminary work of a \$3,500,000 plant to produce 200 tons of kraft pulp and board daily for the Chesapeake-Camp Corp., owned jointly by the Camp Manufacturing Co., Franklin, the Chesapeake Corp., West Point, and the Albemarle Paper Manufacturing Co., Richmond. Pile driving is

#### Bag Factory Unit

Production of 12,000,000 paper bags a day will be increased when additions now being made are completed at the Savannah plant of the Union Bag and Paper Corporation



Progress View of One Section of the Charleston, S. C., Plant of the West Virginia Pulp and Paper Co.



now in progress by the Rust Engineering Co., Pittsburgh, contractor, while the engineering work is by J. E. Sirrine & Co., Greenville, S. C.

The Meade interest of Chillicothe, Ohio, have associated with the Scott Paper Co., of Chester, Pa., to form the Brunswick Pulp and Paper Co., now filling in a 10-

**Two 234-inch Fourdrinier Paper Machines in Union Bag & Paper Corporation's Plant at Savannah, Ga.**

One unit completed, two additional units under way at total cost of \$11,000,000 to produce 750 tons of pine pulp a day

acre site for a \$7,000,000 plant at Brunswick, Georgia, and also with the DuPont estate in Florida in organizing the St. Joe Paper Co., which has started preliminary work on a \$7,500,000 plant at Port St. Joe in Florida. Contractor on the Brunswick plant is the Stone & Webster Engineering Corp., New York, and O. C. Schoenwerk, Chicago, is the mill designer. James Stewart & Co., New York, has the contract for the St. Joe paper mill and George F. Hardy, New York, is the engineer.

At Fernandina, Fla., the Kraft Corpo-

ration of America, a subsidiary of the Container Corporation of America, Chicago, has awarded contract for a \$7,000,000 plant to the Merritt-Chapman & Scott Corp., and George F. Hardy is the engineer, both of New York.

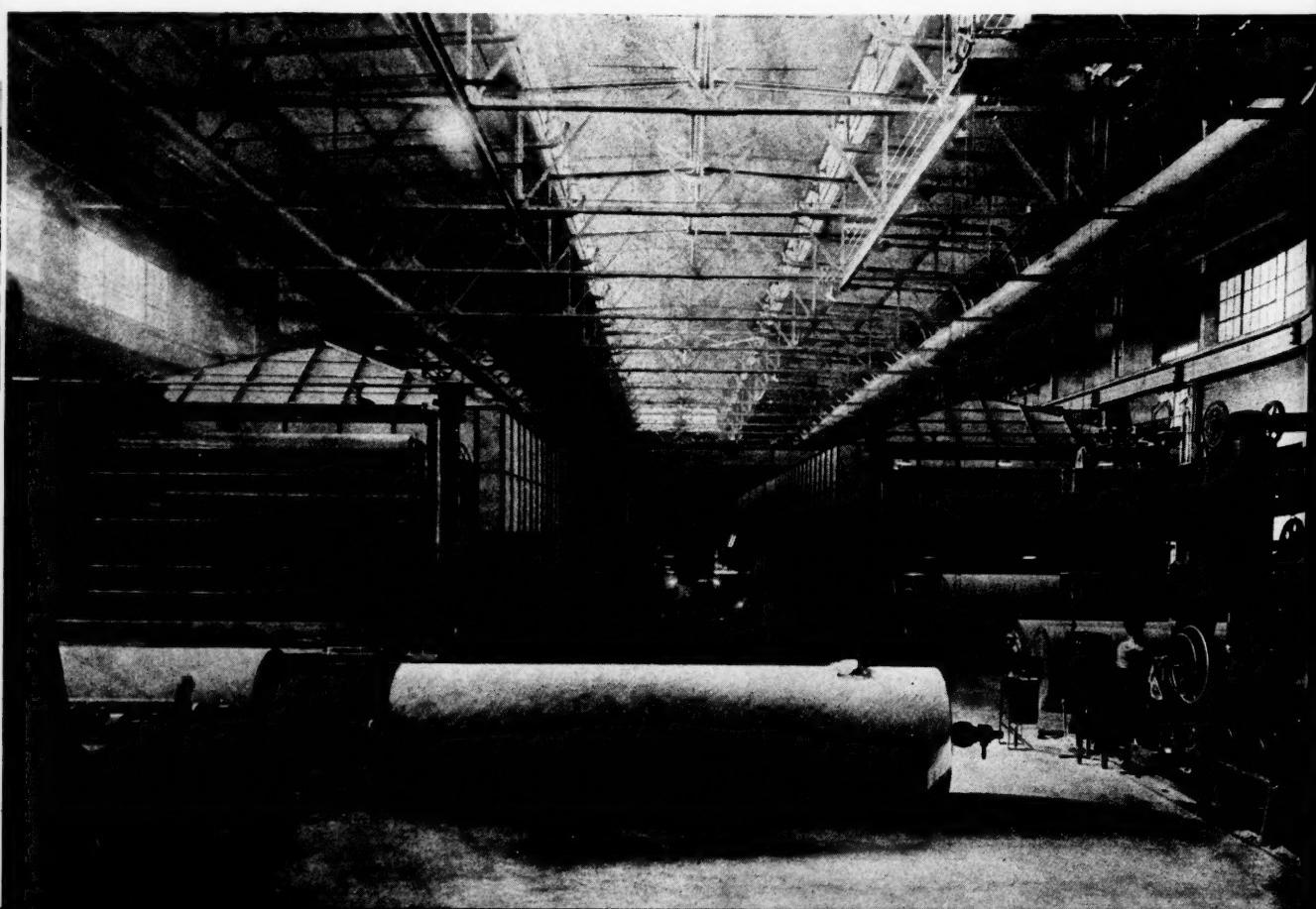
Negotiations have been under way by the National Container Corp., New York, with several Florida municipalities for establishment of a third plant in that state. Pensacola and Palatka are reported as being considered as possible sites for the \$3,275,000 new mill.

**South's First Newsprint Mill**

The South's first newsprint paper plant is to be located in East Texas at a cost of \$5,000,000. Engineers are now making site surveys. To be built by the Southland Paper Mills, Inc., this plant will have a daily capacity of 150 tons of newsprint and 100 tons of kraft. Wirt Davis, Chairman of the Board of the Republic National Bank and Trust Co., Dallas, is actively engaged on the project, with the assistance of many Texas business men. Southern newspapers are contracting for the output of the mill.

It is expected that the newsprint mill will be the first of a number to be built in Southern territory. An interested group

(Continued on page 78)



# \$9,500,000,000 VALUE SOUTH'S MANUFACTURES

## MANUFACTURED

goods in the Southern States are now estimated to have an annual value of \$9,500,000,000. The South's iron and steel, textile, furniture and paper plants, among its major industrial groups, are operating at the highest point since 1929. New plants have been established in widely diversified fields, adding to its manufacturing capacity. Last year more than \$322,000,000 was invested in industrial expansion, with \$72,500,000 under this classification for contracts let in the first quarter of this year. Leading in this greater utilization of the South's resources are iron and steel products manufacturing, pulp and paper and other chemical developments, textile mill modernization, textile fabricating, food processing, and other plants utilizing the products of agriculture.

Preliminary bi-annual census figures just available show that the South's manufactures were valued at \$8,635,000,000 in 1935. In that year its 33,968 manufacturing establishments operating one or more plants spent for materials, containers and power in excess of \$5,400,000,000. They gave employment to an average of 1,567,353 workers during the year and paid out in wages over \$1,221,000,000.

Compared with the depths of the depression in 1933, the 1935 census shows a gain of 22 per cent in the number of active manufacturing establishments in the South; 41 per cent increase in the value of manufactured products; 51 per cent larger expenditures for materials and power; 16 per cent greater employment and 33 per cent increase in wages

	1931	1933	1935
Number of establishments .....	33,677	27,970	33,968
Wage earners, average number.....	1,329,183	1,352,824	1,567,353
Wages paid .....	\$1,124,510,000	\$ 916,281,000	\$1,221,922,000
Cost of materials,			
containers and power .....	\$4,224,050,000	\$3,544,227,000	\$5,400,611,000
Value of products .....	\$7,268,820,000	\$6,122,568,000	\$8,635,011,000

paid. The 1935 figures are also higher than the 1931 census and conservative estimates indicate that manufacturing activity in the South today is approaching the height of the pre-depression year 1929.

During the past 25 years, despite two major depressions, the South has made a sustained increase in manufacturing. Payrolls have more than doubled, plants are buying three times as much materials and producing three times as many goods, measured in value as in 1910.

The South has still higher marks to shoot at for its factories produced \$9,805,000,000 of manufactured goods in 1919 and in 1929 reached a peak of \$11,853,000,000 of manufactured output. Expenditures for materials and power in 1919 were \$6,093,000,000, and \$6,811,000,000 in 1929.

One of the significant facts is that manufacturing in the South, during the recent depression, decreased proportionately less than in the manufacturing plants of the rest of the country. Also, the revival in its textile business led the industrial recovery movement for the entire country after 1933 as it did following the post-war deflation of 1921.

Great as the progress made has been and the extent of the recovery movement

since the depression, Southern manufacturing has yet to enter its greatest era of expansion. Through the further advancement of its paper and chemical industry and allied fabricating plants, greater utilization of its minerals and more widespread development of industry for the manufacture of products and by-products of agriculture the South will undoubtedly far surpass any previous record. Only interference from sources beyond industry's control can stop the new wave of activity and expansion.

Major industries of the South have been operating at the highest rate since the depression and in some lines the volume of output is back to 1929 levels. Iron and steel capacity is being enlarged to handle increased business. Textile manufacturing in the South, which produces over 80 per cent of the cotton goods made in the United States, is at peak operation with many mills working two 40-hour shifts a week. With the South producing about 50 per cent of the wooden furniture made in the country, it has been increasing its leadership in this field as furniture sales continue to grow throughout the country. And so with paper, chemicals, lumber and other Southern industries activity is marked.

## MANUFACTURING IN THE SOUTH, BY STATES

(Compiled from preliminary bi-annual census of 1935)

States	Number of Establishments	Wage earners (average number)	Wages Paid	Cost of Materials, Containers, Power	Value of Products
Alabama .....	1,723	97,999	\$64,976,000	\$211,387,000	\$370,840,000
Arkansas .....	1,070	30,549	18,928,000	73,443,000	122,482,000
Dist. of Columbia .....	490	9,396	13,771,000	28,088,000	73,948,000
Florida .....	1,912	53,215	33,441,000	76,616,000	162,359,000
Georgia .....	2,827	141,898	85,030,000	323,770,000	518,645,000
Kentucky .....	1,631	67,368	62,994,000	291,013,000	470,838,000
Louisiana .....	1,596	62,842	46,477,000	290,631,000	436,442,000
Maryland .....	2,697	119,903	111,303,000	441,147,000	755,843,000
Mississippi .....	1,059	36,939	19,994,000	70,933,000	121,557,000
Missouri .....	4,391	162,139	159,499,000	748,180,000	1,205,640,000
North Carolina .....	2,627	229,474	152,118,000	733,750,000	1,114,387,000
Oklahoma .....	1,334	25,147	25,479,000	203,916,000	282,623,000
South Carolina .....	1,135	109,940	67,605,000	184,500,000	301,142,000
Tennessee .....	1,998	116,671	86,722,000	303,286,000	532,084,000
Texas .....	4,177	104,740	97,069,000	763,847,000	1,076,175,000
Virginia .....	2,259	121,816	96,501,000	457,334,000	719,776,000
West Virginia .....	1,042	77,317	80,105,000	198,770,000	370,230,000
Total South .....	33,968	1,567,353	\$1,221,922,000	\$5,400,611,000	\$8,635,011,000

# SOUTH'S STEEL INDUSTRY

**W**ITH its iron and steel mills and fabricating plants more active than for the past eight years, the steel making centers of the South are experiencing a return of prosperity of more normal times. Mills are operating on 24-hour shifts and officials of five major iron and steel producing firms in the Birmingham district are reported as saying that business is better in that section than at any time since the World War. Production has been stepped up and expansion programs undertaken in recent weeks are being pushed.

Of equal importance has been the increasing development of metal fabricating plants in the South leading to greater diversification of its iron and steel output.

## Rushing Work on \$31,000,000 Improvements

Work has proceeded to excavation on the United States Steel Corporation's \$29,000,000 plan to expand operations of its Alabama subsidiary, the Tennessee Coal, Iron and Railroad Company, Birmingham. This program involves establishing the first tin plate mill in the deep South. J. L. Perry, the subsidiary's president, announced that the tin plate mill production program would require two batteries of coke ovens, a blooming mill, a modern 48-inch continuous hot strip mill, a cold reduction department with a capacity of 200,000 gross tons of tin plate yearly.

The additions will substantially increase the productive capacity of the Tennessee Coal, Iron and Railroad prop-

## Greatest Activity in Many Years--Plant Expansion Being Pushed to Meet Increasing Demand for Its Metal Products

erties. Annual output of the widestrip mill is estimated at 300,000 tons and that of the two cold rolling mills, at 200,000 tons. Production of the tinning department has been placed at 4,000,000 base boxes. Previous to making public the proposal to build the tin plate mill, announcement has been made of a \$2,000,000 expenditure for reconstructing a battery of coke ovens at the company's Fairfield works, which upon completion of the work will have an increase of 1,100 tons in daily capacity.

## Other Major Projects

Gulf States Steel Company, another Alabama organization, in a statement filed with the Securities Exchange Commission, announced that the manufacture and sale of tin plate was under advisement. The plans are now being prepared. The specific nature of these improvements, however, had not been determined and W. H. Coverdale, president of the company said that the question of entering the tin plate field was yet an open one.

The Bethlehem Steel Corporation, under a \$35,000,000 improvement program, is making extensive additions to its Sparrows Point, Md., plant which are fully described in another article in this issue.

The Sheffield Steel Corporation, Kansas City, Mo., is the scene of the latest expansion proposed for the South's steel

industry. Operated as a subsidiary of the American Rolling Mill Company, which is launching a \$12,260,000 program of improvements and expansion, this plant will have its capacity increased by construction of one or more open-hearth furnaces.

The Weirton Steel Company, West Virginia, unit of the National Steel Corp., has been improving and modernizing its 48-inch strip and tin plate mills with a consequent additional capacity of 25 percent.

Rustless Iron and Steel Corporation, Baltimore, is now carrying out a \$625,000 program of additions and betterments, with the expectation that additional appropriations will be made during this year for supplementary facilities for annealing and pickling, warehousing and shipping. The improvements under way are being made in the melting department, rolling mill, cold mill and power department.

## More Can Making Plants for the South

Recognition of a growing demand for lighter steel products has been one of the primary factors in this steel industry expansion. The increase in such demands is readily realized from the fact that the foremost can companies of the country have for the past six months been establishing plants at widely separated locations in the South. The latest major plant, on which construction has been started is that of the Crown Can Company at St. Louis, Mo. The expenditure reported for this unit, was placed at \$3,500,000. Owens-Illinois Can Company, which last year built a \$300,000 plant at Baltimore, is preparing to build a \$500,000 plant in St. Louis.

The National Can Co., Baltimore, is about ready to start actual construction on a \$150,000 addition to relieve crowded conditions at a plant previously entirely rebuilt at a cost of \$200,000. Expansion of the Continental Can Company's operations in the New Orleans area involved expenditure of \$500,000 for erection of a new factory and warehouse and completion of a \$500,000 plant at Tampa, Fla. Houston was also the location of a continental expansion.

Plans of the American Can Co. call for doubling of the capacity of the plant built in 1935 at Tampa at the cost of \$250,000.

(Continued on page 68)

## PRODUCTION OF PIG IRON AND FERRO-ALLOYS

(Compiled by American Iron and Steel Institute)

	1932	1933	1934	1935	1936
<b>PIG IRON:</b>					
Pennsylvania .....	2,103,180	3,728,839	4,244,566	5,479,792	9,102,875
Ohio .....	2,387,028	3,918,723	4,207,944	5,634,530	7,206,655
Indiana, Mich. ....	1,034,801	1,469,783	2,184,546	2,898,478	4,168,299
Illinois .....	919,280	1,012,676	1,269,154	2,003,388	2,917,016
Alabama .....	652,898	900,170	1,171,650	1,297,960	1,998,212
Mass., New York .....	624,141	665,928	1,053,257	1,415,755	2,220,522
Md., Va., West Va., Ky., Tenn. ....	680,774	1,143,600	1,318,964	1,781,171	2,102,106
Minn., Iowa, Col., Utah .....	147,562	161,000	226,808	269,686	500,862
Total .....	8,549,664	13,000,719	15,676,889	20,780,760	30,216,547
<b>FERRO-ALLOYS:</b>					
Pennsylvania .....	85,194	163,798	164,776	219,947	330,463
New York, N. J. ....	85,875	98,857	140,711	195,281	243,176
Ohio, Ill., Ia., Col., Va., West Va., Ala., Tenn. ....	41,510	63,386	116,402	113,147	164,173
Total .....	231,789	344,883	461,684	591,939	812,640
Grand total .....	8,781,453	13,345,602	16,138,573	21,372,699	31,029,187

# BETHLEHEM ADDS TO MARYLAND PLANT FACILITIES

**N**EW units now under construction at the Bethlehem Steel Company's Maryland Plant at Sparrows Point, Md., will enhance Baltimore's growing importance as a steel producing center both from a tonnage standpoint and also in the range of its steel products.

Since it was taken over from the Pennsylvania Steel Company in 1916 by the Bethlehem Steel Company the plant at Sparrows Point has become, through reconstruction and enlargement, one of the largest and most modern steel plants in the country. The total capacity after the various additions have been made will call for ingot production at the Maryland plant of 2,400,000 tons annually.

The most important of the new units to be added will consist of a 56-inch continuous hot mill, supplemented by cold mills, for the manufacture of hot rolled strip and sheets and cold-reduced tin plate. A new four-strand continuous rod and bar mill will be another important addition. These key production units, in conjunction with the incidental additions and improvements that are being made, such as provision for increased tinning capacity, and enlarged wire drawing and finishing facilities, are a part of a program representing a total expenditure that was authorized in the fall of 1936 of \$35,000,000, and is a continuation of the program of construction in various Bethlehem plants started in 1935.

The construction work on these key

**Total Ingot Production 2,400,000 Tons Annually When Improvements Are Completed at Sparrows Point**

units, and on the various enlargements and improvements that are called for, as well as on a number of minor auxiliary units is now actively in progress. Among the units already completed is a cold reducing mill for making tin plate. An additional cold rolling unit is scheduled to go into operation in July, and it is expected that the continuous hot mill will be completed and ready to operate in the early fall, and soon thereafter the new rod and bar mill should also be completed.

When the work is completed and the enlarged facilities are fully in operation it is estimated that the force employed at the plant which is now approximately 18,000 will be increased by 2500 men.

The continuous hot strip mill will have an annual capacity of 600,000 tons. A considerable part of its product will be sup-

#### Airview of Sparrows Point, Md., Plant of the Bethlehem Steel Company

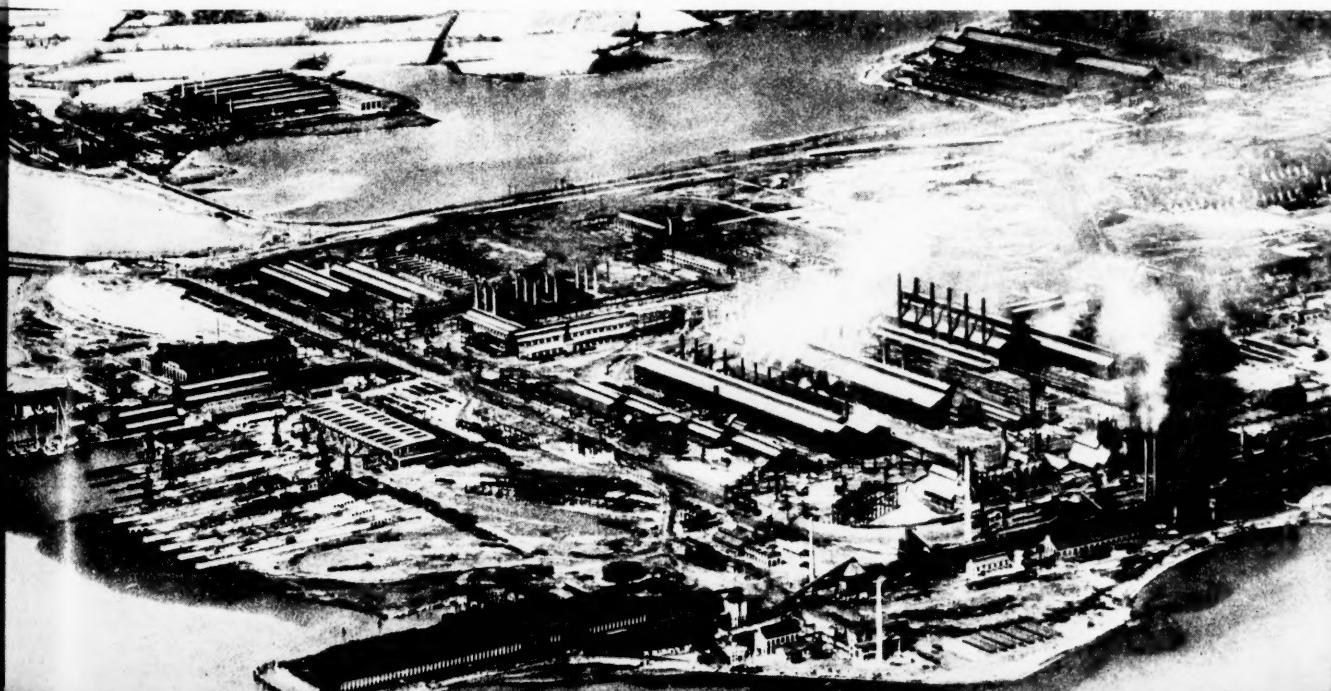
Extensive additions are now under way as part of the \$35,000,000 construction program of the company including rod and bar mills, strip, sheet and tin plate manufacturing. Total ingot production at the Maryland plant will be 2,400,000 tons annually when improvements are completed.

plied as break-down coils to the cold reducing units for processing into tin plate, manufacturing terne, black plate and other tin mill products. The cold reducing units will have an annual capacity of 210,000 tons. The remainder of its output will be supplied both in the form of sheets and as strip to meet manufacturing requirements for a wide range of flat steel products.

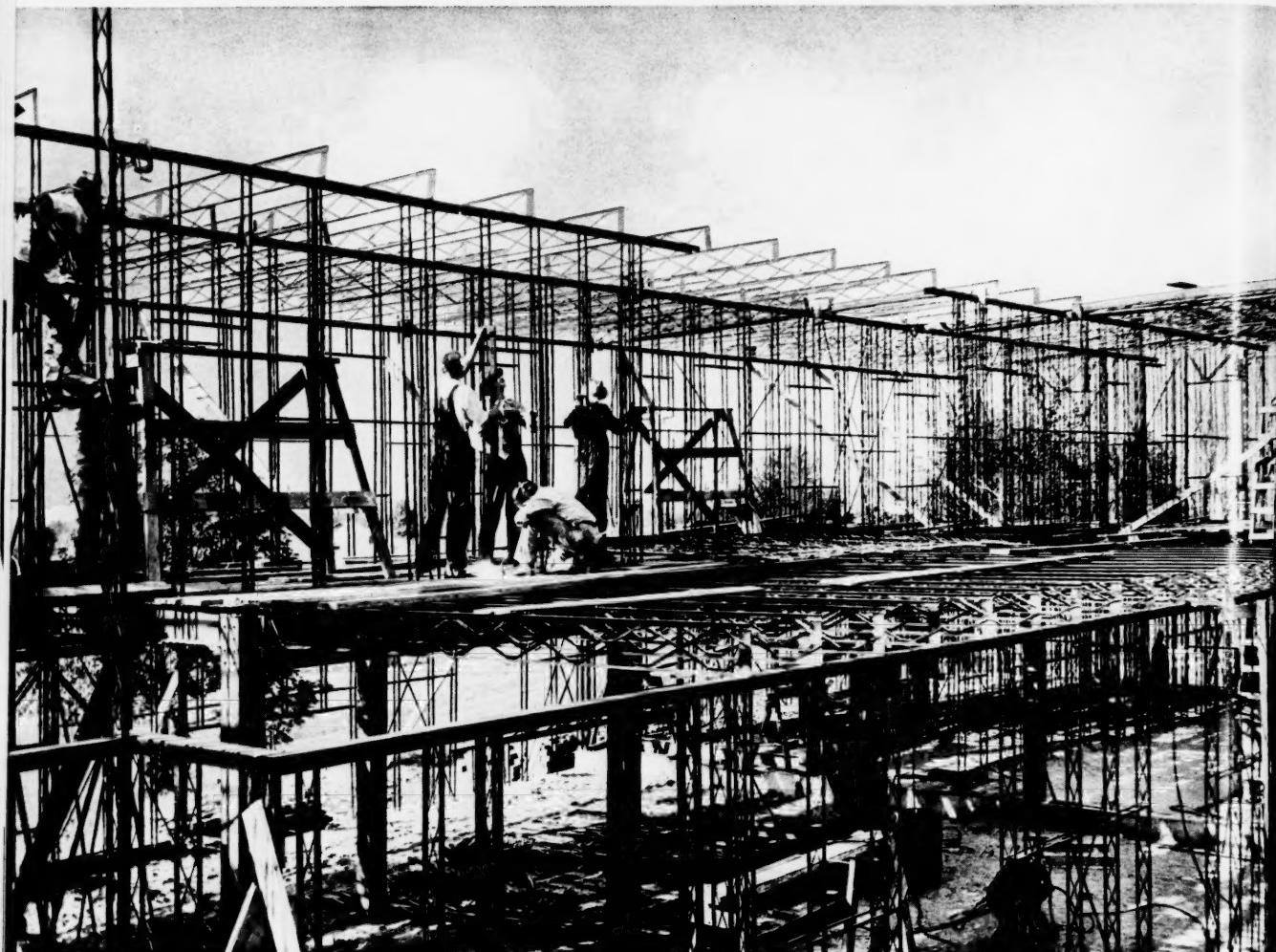
The new facilities will be utilized for the most part to meet increasing demands for finished and semi-finished products that are already being produced at this plant such as tin plate, sheets, rods, wire, nails, barbed wire, and bale ties. In some instances, also, as in the case of cold-reduced tin plate and bars, the new equipment will be utilized to manufacture new or improved products.

The continuous hot mill will be located east of the existing sheet mill department. It will cover 1,500,000 square feet, or approximately 40 acres, will have 15,000 tons of machinery, and will use 40,000 horsepower in the rolling of the steel. A new slabbing mill already in operation supplies the semi-finished material, the slabs being transported on cars to a slab

(Continued on page 68)



# Bethlehem Steel Frame



## brings greater safety and permanence to light-occupancy structures

WHEN the University of Georgia recently erected student dormitories in Americus, Athens, Carrollton, Dahlonega and Tifton, the buildings embodied the same basic features of construction found in a fire-safe office building.

The use of steel framing in moderate-sized buildings like these was feasible from a cost standpoint through the use of Bethlehem's light structural-steel members.

These light steel members include Bethlehem solid-web Joists and Stanchions, similar to regular heavy structural shapes but with thinner webs and flanges; and Bethlehem Joists and Studs having open or lattice-type webs, making them really light steel trusses.

Available in a wide range of sizes, Bethlehem light steel members do not restrict the designer and may be bolted, riveted or welded into complete steel frames with but slight departure from conventional

construction methods. The resulting frame is permanently free from shrinking and warping, immune to attack by termites and provides the basis of a high degree of fire-safety. It brings a large measure of skyscraper safety, permanence and rigidity to such light-occupancy structures as country schoolhouses, smaller apartments, stores and residences, as well as dormitories.

\* \* \*

*Bethlehem is unusually well-equipped to supply the South with steel. The Bethlehem plant at Sparrows Point, Maryland—the country's only large steel plant on tidal water—is well-within the borders of the industrial South. In addition, Bethlehem warehouses, strategically located throughout the South, are stocked to satisfy immediate needs with minimum delay, drawing on other Bethlehem plants for materials not produced at Sparrows Point.*

S  
P  
au  
of  
co  
du  
as  
be

W  
Be  
inc  
wi  
per  
tel

ST  
All  
bla  
qua  
can  
Bet

ST  
Bet  
mer  
com  
as lo  
por

SOM  
strip  
steel  
smal  
raill

BETH  
Balti  
Honol  
Pittsb  
Seatl

B

NYM



## STEEL PLATES FOR EVERY REQUIREMENT

Plate production at Sparrows Point is centralized and under a single authority from ore dock to final inspection, assuring the uniform quality of all Bethlehem Plates. Here sheared and universal plates are rolled in a complete range of widths and thicknesses. In addition, Bethlehem produces alloy plates in grades and types to meet special requirements, such as nickel-steel for locomotive boiler courses; abrasive resisting plates to bear the brunt of cascading rock and other abrasive materials.

## WIRE AND WIRE PRODUCTS

Bethlehem manufactures a complete line of wire and wire products, including barbed wire; nails, staples; bale ties; spring wire; bethanized wire (protected against corrosion by a uniformly thick armor of 99.99 per cent pure zinc); bethanized farm, lawn and chick fence; bethanized telephone wire; strand; galvanized wire.

## STEEL PIPE

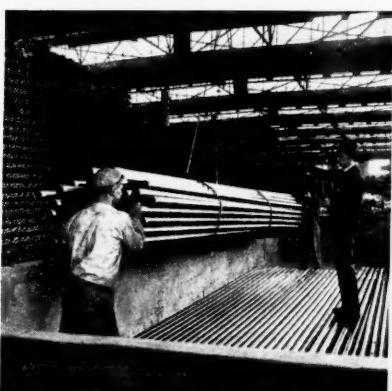
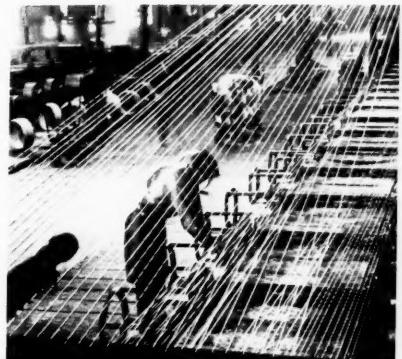
All Bethlehem Steel Pipe—butt-welded; lap-welded; standard and line; black and galvanized; copper-bearing—is noted for its easy-threading qualities, exceptional softness and ductility and freedom from scale; it can be installed with perfect confidence. For water-distribution systems, Bethlehem manufactures welded steel pipe.

## STEEL SHEETS

Bethlehem produces a complete line of steel sheets to meet all requirements of sheet users. Beth-Cu-Loy (copper bearing steel) sheets are of the composition that impartial tests indicate to last from two to three times as long under exposure to rust as ordinary steels and irons. They bring important savings in all installations where dampness is a factor.

**SOME MORE OF BETHLEHEM'S LEADING PRODUCTS**—Hot- and cold-rolled steel strip; tin plate; bars and special sections; wide-flange structural shapes; steel construction; steel sheet, H- and Z-piling; bolts and nuts—rivets—spikes; alloy steels; tool steels and small tools; pig iron; ferro-manganese; steel fence posts and gates; car wheels and axles; rails and accessories.

BETHLEHEM STEEL COMPANY, *General Offices*: Bethlehem, Pa. *District Offices*: Albany, Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Hartford, Honolulu, Houston, Indianapolis, Kansas City, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, Portland, Ore., Salt Lake City, San Antonio, San Francisco, St. Louis, St. Paul, Seattle, Syracuse, Toledo, Washington, Wilkes-Barre, York. *Export Distributor*: Bethlehem Steel Export Corporation, New York.



# BETHLEHEM STEEL COMPANY

# COTTON MANUFACTURING NEAR PEAK

## Threatened Labor Agitation Blow at Activity in the South

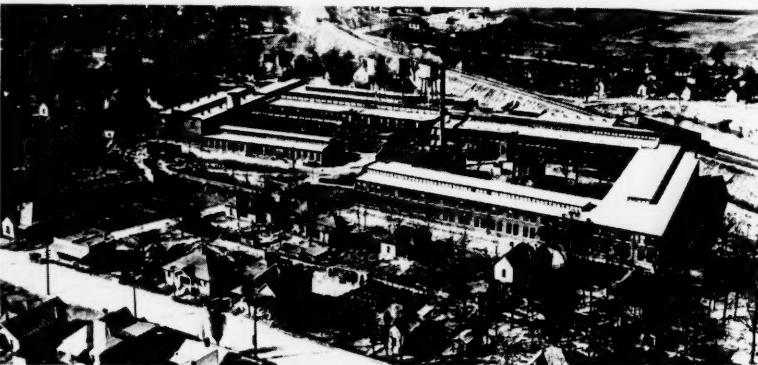
THE Southern textile industry has been operating recently at the highest rate since the depression. Many mills have been running two 40-hour shifts a week and employment, payrolls and wage rates have increased. During February cotton mills set an 8-year record of cotton consumption. More than 664,000 bales of lint cotton were used in all American mills as contrasted with the previous peak of 595,000 bales in February, 1935. Nearly 1,000,000 bales more of cotton have been consumed during the first 7 months of this season than for the corresponding period of the previous season.

Employment in the textile industry is within 7,000 of the 1927 peak and the average wages per hour are at the highest point and 20 per cent above the prevailing wages of 1929. During the past four months the general wage level of the industry has been raised 10 per cent.

As the industry is experiencing a record period of activity two events are claiming the attention of management and workers. The Southern Textile Exposition opened April 5 for a week at Greenville, S. C., and more than 300 cotton manufacturers of the Southern states are expected to attend the annual convention of the American Cotton Manufacturers Association to be held May 13-14 at Washington, D. C.

Coming at a time when Mr. Lewis' Committee for Industrial Organization is preparing to make a drive for union control of the textile industry of the country these meetings afford an opportunity to review accomplishments in the South and

**United Hosiery Mills, Chattanooga, Tenn.**  
Textiles form one of Chattanooga's most important industries and are part of the great textile making activities of the South



40

what the industry has meant to Southern labor.

Last year nearly 78 per cent of the spindle-hour operation of cotton mills was in the South. While the South increased its spindle-hour operation over the previous year by nearly 20 per cent, New England showed a decline of over 3 per cent. The spindle-hour operation in New England is now about half of what it was 10 years ago. The total number of cotton spindles in the United States has steadily declined since 1922 until today there are fewer spindles in place in all domestic mills than for any year since 1908. While the rest of the country was losing its spindle capacity the South was gaining through the building and expansion of mills and the removal of mills from the North to this section. Today it has over half of the installed cotton spindles of the country, 72 per cent of the active spindles and is consuming over 84 per cent of the cotton used in American mills.

Having 70 per cent of the rayon producing capacity of the country, over 51 per cent of the installed cotton spindles in American mills and producing over 60 per cent of the hosiery made in the United States, the South's importance as a producer of textiles is evident.

Outside labor agitators are keen to invade the Southern textile field, in spite of the fact that unionization of its textile workers in the past has fallen on barren ground. The Southern mill operatives, practically all of native American stock, know that the mills gave most of them their first opportunity to earn a living other than from farming. The mills created employment and established villages with conveniences and living conditions that the workers had never had before. They have been treated as free American citizens and do not see any reason to pay tribute to outsiders for the privilege of working.

The South Carolina State Legislature is considering a bill calling for a 40-hour

5-day week for the textile industry and opposition has developed among the Greenville Trades and Labor Council unless the same hours apply to all industries in the State. As a matter of fact most cotton mills in the South have been operating on a 40-hour basis since NRA days. They have been increasing the rate of wages. This has been done in the face of increased foreign competition especially from Japan. The threatened disorganization by outside labor agitators will further intensify the problems confronting the industry just when it is recovering from several years of profitless operation and tremendous losses due to the depression. The progress that has been made will be wiped out should paid agitators, pressing textile workers to "join the union," succeed in creating labor disturbances. It has been claimed that only about 10 per cent of the workers favor unionization of the mills. An upset of this kind forced by outside influences, would be a severe blow not only to ownership but to labor, and the reviving prosperity of the South.

## New Cellulose Extraction Process

A NEW process for the manufacture of cellulose, the invention of Matthew J. Stacom, president of the Island Lumber Company, Long Island City, N. Y., may revolutionize the whole cellulose industry is the belief of experts who have been investigating it. The far-reaching claims include lower cost of production and greater efficiency through the development of a machine capable of producing pressures from 100,000 to 140,000 pounds per linear inch heretofore not practical on a commercial scale. The new process separates in one major step the solid cellulose from its liquid and non-cellulose components and is equally effective on wood as it is on waste products such as bagasse, corn stalks or other cellulose materials. It has possibilities for the processing of seasonal agricultural products for the reclamation of their fibers and extracts.

Professor H. M. Ullman, head of the Chemical Engineering Department, Lehigh University, and Leonard C. L. Smith, consulting engineer, have been working with Mr. Stacom in perfecting the process and equipment.

# MORE INDUSTRIES FOR THE SOUTH

**86 New Establishments in 1936 Representing Investment of \$7,200,000 on the Illinois Central's Lines in the South While 49 New Industries Are Considering Southern Locations**

By

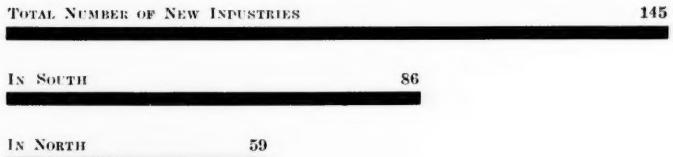
**Mark Fenton**

General Industrial Agent,  
Illinois Central System

**PROSPECTS** for continued industrial expansion during 1937 along the Illinois Central System, especially in the South, are most encouraging. If 1936 experience holds true, more than half the communities to benefit by new industries on this railroad in 1937 will be south of the Ohio River.

At the time I write, the Industrial De-

## NEW INDUSTRIES ESTABLISHED Along the Illinois Central System During 1936



The list of new industries established along the Illinois Central System in the South during 1936 includes:

### ARKANSAS

**Helena**—petroleum products.

### KENTUCKY

**Henderson**—furniture.

**Louisville**—petroleum products, distillery.

**Madisonville**—coal mining.

**Marion**—mining.

**Meadow Lawn**—whiskey.

**Owensboro**—chairs.

**Richland**—coal mining.

### LOUISIANA

**Baton Rouge**—ethyl fluid, building materials.

**Doyle**—automobiles and accessories.

**Fluker**—lumber and ties.

**Hammond**—petroleum products.

**Haughton**—petroleum products.

**Independence**—canned vegetables.

**Monroe**—sawmill machines, farm implements.

**New Orleans**—lumber, building materials,

syrup, packing house products, alcohol.

**Ponchatoula**—cold storage and ice, lumber.

**Shreveport**—feed and flour.

**Tallulah**—two cotton compressors, implements.

### MISSISSIPPI

**Bolton**—staves.

**Brookhaven**—cottonseed, garments.

**Charleston**—lumber, sand and gravel.

**Clarksdale**—petroleum products.

**Collins**—petroleum products.

**Columbia**—rosin, turpentine and pine oil.

**Corinth**—handle squares, bolts.

**Crystal Springs**—shirts.

**Ethel**—handles.

**Greenville**—building material.

**Grenada**—lumber.

**Glen Allen**—sand and gravel.

**Harrison**—lumber.

**Hattiesburg**—livestock.

**Inverness**—building materials.

**Jackson**—bentonite, asphalt.

**Kings**—staves, heading, bodies and trailers.

**Larkin**—sand and gravel.

**Lexington**—sand and gravel.

**Magnolia**—livestock.

**McComb**—oil, flour and feed.

**Meridian**—lumber, petroleum products, cottonseed products.

**Natchez**—lumber.

**Port Gibson**—lumber.

**Silver Creek**—feed and fertilizer.

**Summit**—cotton products.

**Ten Mile**—lumber.

**Tougaloo**—cattle.

**Tribbett**—brooms.

**Utica**—canning.

**Vicksburg**—petroleum products, work shirts.

**Weathersby**—lumber.

### TENNESSEE

**Brighton**—ginning cotton.

**Covington**—petroleum products.

**Dyersburg**—corn sheller, coal.

**Memphis**—laminated wood, lumber, cotton products, stock, spices, castings, sprinkler equipment, air-conditioning equipment,

packing house products, linter, mutes and flues, grain warehouse, wood preservatives.

partment is in touch with 49 industries which are giving serious consideration to locating in its Southern territory. Prominent in the list are the following: wooden containers, bags, hosiery, garments, furniture and other types of woodworking, food products, ceramics, canning, liquor, livestock concentration, lumber, roofing and rubber goods.

During 1936 there were 145 new industries established along the lines of this railroad, covering 75 types of business, giving employment to 4,600 workers and representing a total capital invest-

(Continued on page 72)

## Workers Employed in new industries established

**1936**

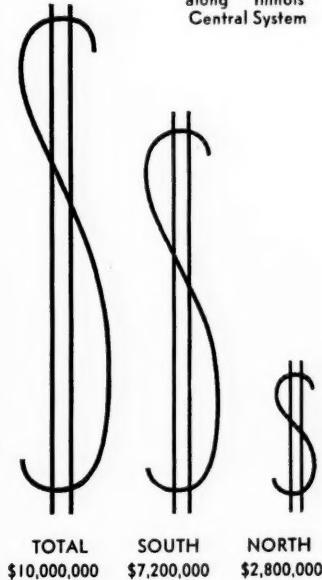
along Illinois  
Central System



## Capital Investment in new industries established

**1936**

along Illinois  
Central System



# MARGARINE—

## A Major Outlet for Southern Vegetable Fats and Oils

By

A. L. Ward

Educational Service,  
National Cottonseed Products Association

**R**ECORD-BREAKING consumption of Southern products during 1936, for the second consecutive year, by the margarine industry again focuses attention upon it as a major development for the South and one, furthermore, closely related to Southern agricultural development. Margarine, a little-understood and much-maligned food, offers one of the greatest potential outlets for Southern products. It undoubtedly offers, also, a large field for industrial expansion in the South, source of the bulk of its raw materials.

### Uses South's Products

Cottonseed oil—a dominant factor in determining the value of the South's \$200,000,000 cottonseed crop—ranked first among domestic fats and oils used in margarine during 1936.

Memphis Plant of the Southern Cotton Oil Co.

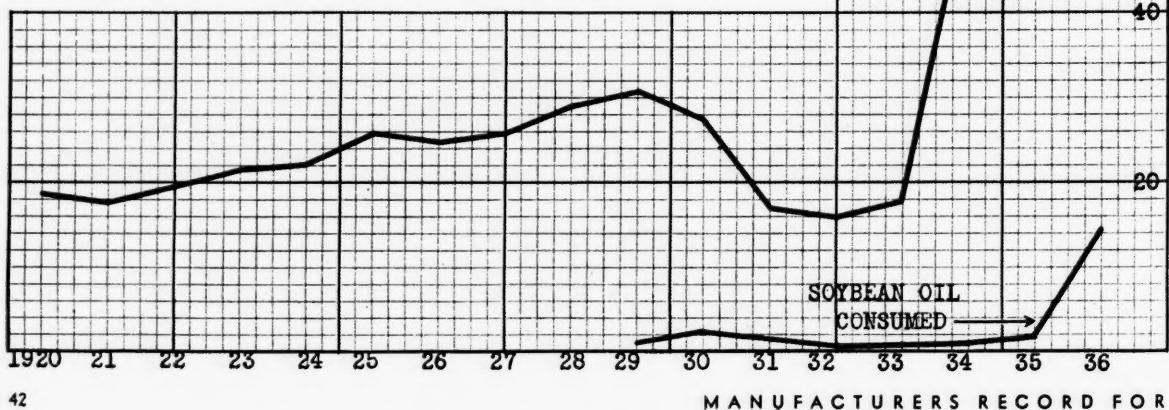
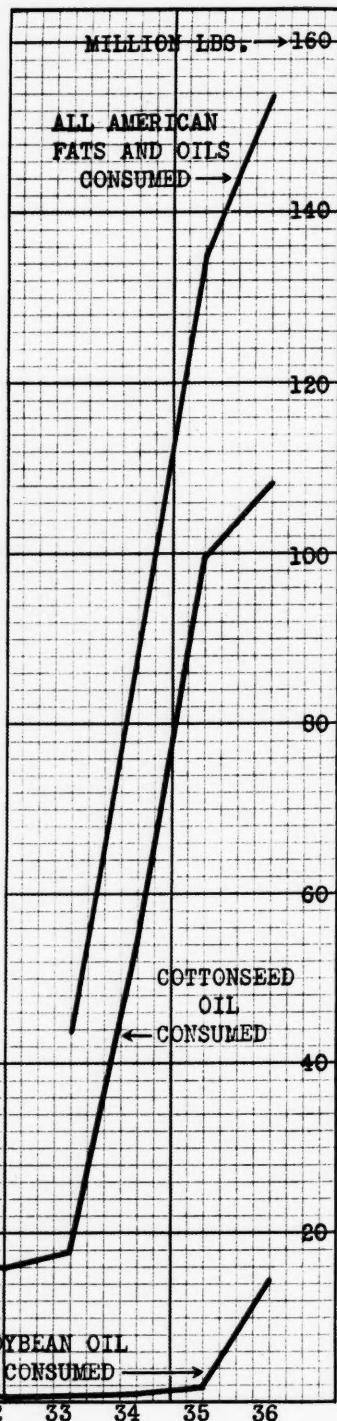
The volume of cottonseed oil used by the margarine industry during 1936—108,106,111 pounds—was of considerable significance to cotton growers, ginners, cotton oil mills and all others of the millions affected by the South's cotton economy. Even more significant, however, is the marked increase in consumption of

(Continued on page 70)



Consumption of Cottonseed Oil and Soybean Oil by Oleomargarine Industry

*The Phenomenal Increase in the Consumption of American Fats and Oils in Recent Years Is Shown Below.*





# TRUCK TRANSPORTATION GAINS IN THE SOUTH

By

Arthur C. Butler

Secretary, Motor Truck Committee  
Automobile Manufacturers Association

**1,201,954 Registration Is  
12.5 Per Cent Over 1935  
14,754 Trucking Concerns  
Operate 37,405 Vehicles  
and Do Gross Business of  
\$89,531,000 a Year**

**T**HE increasingly important role motor truck transportation plays in production and distribution in the South is reflected in the new high for state registrations.

A total of 1,201,954 trucks served farmers, manufacturers and retailers in the 16 Southern states during 1936. This represented an increase of 12.5 per cent over the 1,068,930 trucks registered during 1935 in the same States. The increase ranges from seven-tenths of one per cent in North Carolina to 30 per cent in Mississippi.

A preponderance of the commodity movement over the highway is under the direction of shippers in their own trucks, approximately 85 per cent of the vehicles being owned and operated by those who transport their own commodities in their own vehicles. While the area of economical distribution by truck is steadily increasing with improvement in highways and the vehicles, the greater part of truck movement is either in local city operations or inter-city service within the states.

## Interstate Commerce Shipments

Recent surveys throughout the country by the Bureau of Census of the Department of Commerce, show that somewhere between 6 and 8 per cent of the vehicles are moving in interstate commerce.

Incidentally, these Government surveys indicate the status of for-hire truck transportation in the 16 Southern states. For 14,754 trucking concerns operating 37,405 vehicles in these states the gross revenue was \$89,531,000, employees totalled 33,066, and the total annual payroll for 1935 was \$27,487,000.

This does not cover all the for-hire vehicles in the Southern area, but supplies a picture of revenues collected and monies expended for employment.

Highway transportation has advanced in the Southern states, where registration fees and gasoline taxes have been higher and limitations on sizes and weights more severe than in the North, East and far West states, largely because the vehicles perform a service that cannot be duplicated by any other transportation agency.

This service is required even where trucks are moving commodities between cities and states where services of other agencies are available, but they are also used in the movement of manufactured or farm products to and from thousands of communities that have no other transportation service and depend entirely on the highway vehicles.

In the 16 Southern states there are 20,645 such communities representing 6 per cent of the section's population.

The truck has also played an important part in the movement of manufacturing plants into the Southern states during recent years. As a result of highway expansion and increased truck use, manufacturers and farmers have been able to locate their centers of production, remote from residential and trading sections, where land and taxes are considerably lower.

## Supply Customers' Needs Quickly

Large and small shippers have kept their inventories at a minimum, and at the same time have been able to supply their customers' needs on short notice.

## The Problem of Regulation

Motor transportation "is here to stay," and any regulations or taxation applying to it should be based entirely on the use the vehicles make of the highways, their relationship to other vehicles, preservation of the highways and safe movement in traffic.

This question of taxation and regulation offers a problem which is the subject (*Continued on page 72*)

Trucks for Every Commercial Purpose



# EMPLOYMENT AND WAGES INCREASE IN THE SOUTH

**I**NCREASES in wages made in large plants throughout the North and East have been given much publicity, but relatively little has appeared attesting to such increases in the manufacturing plants of the South. If the automobile industry is excluded, then the average wage rate for all manufacturing industries in the South has increased more than is true in the country as a whole during the period between September and December, 1936. The automobile industry has been excluded for the purposes of this comparison due to the fact that this industry is not important in the South, and also because it has been subjected to pressures that have abnormally increased its wages. The increases noted in the South are based on the records of 820 manufacturing firms regularly reporting to the Research Department of the Southern States Industrial Council. The gains made are an actual reflection of rapidly improving business, and as such, should prove a better criterion of business conditions than figures for other parts of the country.

## Greater Increase in Employment and Wage Rates in the South Than in Rest of Country

In the South, the average wage per hour for all industries has increased 4.5 per cent as compared with an increase of 2 per cent in the country as a whole. This proportionately greater increase in wages in the South has narrowed the margin of difference between wages in the South and other sections to a point where this difference is now less than ever before. In 1933, there was a difference of 33.5 per cent but this has now been reduced to 21.9 per cent.

These facts are especially significant in view of the fact that employment has also increased more rapidly in the South than in any other part of the country, again pointing toward a steady but normal acceleration of business. As a general rule, the addition of large numbers of unskilled workers has a tendency to depress the average wage rate because of the disproportionate number of workers employed at beginner's wages. Therefore, if this element of error could be eliminated, the actual increase in the average wage rate would be even greater. According to figures supplied to the Council by Southern manufacturers, the average wage rate in the South for December,

1936, was 44.2c as compared with an average of 56.6c for the country as a whole, developed from figures recently made available by the Department of Labor. Average hourly wage for the South for September was 42.3c and for the country as a whole, 55.5c, revealing the proportionately greater increase in the South than in other parts of the country.

## More Employed in Manufacturing

Throughout the year 1936, employment in manufacturing establishments increased more in the South than in the country as a whole. In December, the South employed 12.7 per cent more workers than in December of 1935, as compared with an increase of 11.1 per cent for the country as a whole. All industries but three reported increased employment over a year ago, but the outstanding increases occurred in the durable goods industries which showed an increase of 18.7 per cent, and those related to construction activity, such as stone and clay products, with an increase of 24.2 per cent, quarrying and quarry products, increasing 22.7 per cent, and lumber and allied products, 16.5 per cent. Other industries showing unusually large increases were the wearing apparel group with 19.2 per cent increase, the food and allied products with a 16.9 per cent increase, and a 12.6 per cent increase in the cotton textile industry.

## Average Work Week Less Than 40 Hours

The pay envelope of the average worker is now \$17.65 for an average work week of 39.9 hours. This represents an increase of 8.4 per cent in the average weekly wage

## WAGE RATES IN SOUTH AND NORTH COMPARED

December, 1936		
Average Hourly Wage Rates in Manufacturing Industries		
	Year's Average	Per Cent Increase
South . . . . .	44.2	31.6
North . . . . .	56.6*	47.5

Wage Differentials All Industries		
	South	North
1936 . . . . .	44.2	56.6*
1933, Av. . . . .	31.6	47.5

\*Developed from figures available from Employment and Payrolls, December, 1936, Bureau of Labor Statistics, and includes only those industries that are found in both sections, excluding the auto industry and a few others that are not found in the South.

**With an Average Work Week of Less Than 40 Hours the Percentage of Gains in in the South Is Greater Than in Rest of Country. Margin of Difference in Hourly Rates Favoring the South Over the North Is Cut From 33.5 Per Cent in 1933 to 21.9 Per Cent in 1936**

as compared with a 6.1 per cent increase in the number of hours per week. Thus, the average worker is not only receiving a greater wage per week as a result of an increase in the length of his work week, but his hourly rate has also been increased.

It is significant that the South, which many times has been referred to as the section of low wages and long hours, has not increased its average hours per week as greatly as the country as a whole. For December, 1936, the average hours worked per week for the country as a whole was 41.1 hours as compared with 39.9 in the South.

Recent developments in the steel industry and an announcement by Southern textile interests indicating further wage increases since December, point toward even a better showing when subsequent figures are available. These will be reported as soon as returns have been received and analyzed by the Council.

## National Rivers and Harbors Congress to Meet in Washington April 26 and 27

**C**ONSIDERATION of recent national disasters, flood, drought, and dust-storm, and the formulation of a nation-wide program of control and conservation may make the 32nd annual convention of the National Rivers and Harbors Congress the most important in the organization's history. Delegates will assemble April 26 and 27 in the Mayflower hotel, Washington, D. C. The projects committee of the Congress, of which Congressman William J. Driver, of Arkansas, is chairman, will meet April 23 and 24, to consider individual projects.

### FACTS ABOUT CHARLOTTE—

"Charlotte, 'The Friendly City,'" is the title of a booklet among others presenting interesting facts about Charlotte, prepared and distributed by—

**The Charlotte Chamber of Commerce, Inc., Charlotte, N. C.**



## Steel on Exhibition

As a part of its Centennial Program, the City of Fort Worth, Texas, has built this magnificent coliseum for exhibition purposes and general community use. This building is 232 feet by 405 feet with a clear unobstructed width inside of 217 feet.

Wyatt C. Hedrick and Elmer G. Withers Architectural Co. of Fort Worth were associated engineers and architects.

James T. Taylor, Fort Worth, General Contractor.

Steelwork by Virginia Bridge.

## Steel Structures

**M**OST of the notable structures of today have been made possible and practical through Steel Construction. For Steel is the most adaptable and dependable of all structural materials. Our organization and facilities have been active in Steel Building for over forty years.

### VIRGINIA BRIDGE COMPANY

Roanoke      Birmingham      Memphis      Atlanta  
New York      Charlotte      Dallas      El Paso  
Plants at Roanoke, Birmingham, Memphis.

# VIRGINIA BRIDGE

# OBSOLETE EQUIPMENT

## A Drag on Industrial Recovery

**W**HILE the growing obsolescence of plant equipment of American factories has been stayed, the number of obsolete plants, or those partly obsolete is still tremendous and is acting as a deterrent upon the heightening of general manufacturing prosperity.

The matter is succinctly put by W. E. Whipp, President Monarch Machine Tool Company. "In order to restore our standard of living and to elevate it to much desired still-higher levels, it is just as important to decrease manufacturing costs as it is to increase wages. This can be done only by constantly manufacturing more and better things to be sold at progressively lower prices. In attaining these ends, the machine tool industry becomes the service industry to American industry."

The Department of Commerce reported some time ago that "about 65 per cent of the machine tools in the country are over ten years old and more or less out of date." With the sharp and continuing rise in machine tool orders that is taking place, this figure may be somewhat high today. It is also true that standards of obsolescence must vary with respect to kinds and individual machine tools and also because the degree of technological advancement is not always uniform.

### 50 Per Cent Gain in Machine Tool Orders

It is estimated by the machine tool industry that the value of all orders placed during 1936 exceeded the 1935 volume by 50 per cent. Orders for domestic delivery equaled in value, approximately, the sum of all the domestic business placed during the two preceding years of 1934 and 1935. This increase in orders came from consumer industries which are busier now than they have been for the last five years. In addition to those already named, the aircraft, agricultural implement, steel fabrication and electrical equipment industries have been and are important buyers.

The index of machine tool orders compiled by the National Machine Tool Builders' Association reached 257 for December, representing the highest volume of business placed in any one month since 1919. This is indicative, in the minds of the leaders of the industry, of the determining role machine tools will play in 1937. "Manufacturers are turning to machine tools to obtain a progressive reduction of processing costs," says Mr. C. R.

Burt, President of the Association and President Niles-Bement-Pond Co. "Insofar as the cost of goods per piece or per unit of production can be lowered or held down by the introduction and efficient use of machinery in mass production and distribution, the higher wages and salaries justified by such economies will be translated into an actual increase in purchasing power."

"Modernization is also the road to profits in a hectic period of expanding markets," maintains Mr. Burt.

### Huge Pent-Up Demand

In April, 1935, it was estimated that the pent-up demand for machinery represented \$18,000,000,000. Of this estimated total, machine tool held-back demand amounted to three-quarters of a billion.

It is interesting to reflect upon the great stimulation to business generally that would result from the catching up on modernization. In the first place, the value added through labor in the average machine tool plant is about four times that added in other manufacturing plants and often aggregates from 50 to 60 per cent of gross sales. This means that the initial impetus is felt very slightly in increased labor payrolls in the machine tool plants themselves. Of course, the effect of increased machine tool orders begins to be felt in the rear of the machine tool industry; i. e., in the steel and raw material fields, although naturally not to any great extent inasmuch as machine tools are durable goods and consequently not made in consumer quantities.

The most startling effect comes in the machinery and finished product fields. Here a relatively small investment in machine tools brings about amazing savings and efficiencies in the manufacture of goods from automobiles to knick-knacks. These savings are usually reflected in a combination of increased quality and decreased price to the consumer resulting in an enlarged market for the goods in question. If the goods are large and intricate, as in the case of automobiles, activity is greatly stimulated in the raw material field; payrolls are increased all the way around and the country as a whole profits from the enjoyment of a new prosperity.

### Depreciation Reserves

One problem connected with the replacement of obsolete plant equipment is

### CENSUS MACHINE TOOL MANUFACTURES, 1935

Number of establishments .....	259
Wage earners .....	28,186
Wages .....	\$37,260,000
Cost of materials and power .....	\$36,347,000
Value of products ....	\$121,832,000

### Some Progress Made in Relieving Pent Up Machinery Demand Estimated at Over \$18,000,000,000 in 1935

that of adequately handling depreciation and building up of depreciation reserves. There is still too great a reluctance on the part of manufacturers to dispose of machine tools that have been in use in their plants for a long time, because they feel that these old machines are still useable and to replace them with new machine tools would be to run afoul of the laws of thrift.

For depreciation purposes obsolescence has been defined as the loss in value of an asset brought about by exhaustion of raw materials, or the development of another asset that will better do the same thing or replace the product, before the original estimated life of the asset has elapsed and the cost recovered through depreciation. Depreciation has been defined as the shrinkage in the useful value of an asset chargeable as a cost of production upon such basis as may be estimated. To take care of this inevitable depreciation reserves are built up and these reserves should be recovered from product sales.

From this more particular accounting or financial angle, many manufacturers who have learned to keep the wolf of obsolescence from their factory doors, make two estimates of the expected future useful life of an asset. One is based on wear and tear, and is intended for tax purposes. The other is based on obsolescence as well, and is the basis on which they decide when it is necessary to replace the equipment. There may be very substantial profits in replacing a machine while it is still in running order and long before the rates of depreciation permitted by the tax laws have erased its cost from the books.

Almost invariably obsolescence would dictate the replacement of the machine long before it is fully depreciated.

According to one authority in the field, Professor P. T. Norton, of the Virginia Polytechnic Institute, "in most cases it will be found that the book value is greater than the realizable value, indicating that insufficient depreciation has been charged. It is often claimed that this difference represents a loss which is caused by the machine which replaces the present machine and that the loss should therefore be charged in some way against the new machine. This is, of course, not true. In the first place, there would be no such difference if the actual life and the realizable value had been known at the time the depreciation rate on the present machine was set. In the second place, this book loss may not be a real loss at all because the present machine may have been so profitable that it would have

(Continued on page 68)

# Long Distance Rate Reductions bring far-away friends **NEARER and NEARER**

A SERIES of rate reductions from 1926 to 1937 has substantially cut the cost of Long Distance telephoning. These reductions have been made in accordance with Bell System policy to reduce Long Distance rates whenever improvements in telephony and the volume of business permit.

Today's low Long Distance rates make it easy to keep in touch with out-of-town friends and relatives . . . frequently, pleasantly. They make it easy to do business across the miles with branches, customers and prospects . . . quickly, personally.

Below are rates for 3-minute daytime calls between representative cities. . . . Call some one far away today, and find how much genuine pleasure Long Distance can bring you . . . at low cost.

**HOW LONG DISTANCE RATES HAVE BEEN CUT  
AS THE RESULT OF 8 REDUCTIONS IN RECENT YEARS:**

RATES FOR 3-MINUTE DAYTIME CALLS *		Station-to-Station		Person-to-Person	
From	To	January 15, 1926	Jan. 15, 1937	January 15, 1926	Jan. 15, 1937
Baltimore	Philadelphia	\$ .65	<b>\$ .50</b>	\$ .80	<b>\$ .70</b>
Cincinnati	Detroit	1.55	<b>.90</b>	1.90	<b>1.25</b>
Buffalo	Toledo	1.70	<b>.95</b>	2.10	<b>1.30</b>
Boston	Washington	2.40	<b>1.25</b>	3.00	<b>1.65</b>
Chicago	Little Rock	3.40	<b>1.65</b>	4.25	<b>2.20</b>
Atlanta	Kansas City	4.30	<b>2.00</b>	5.35	<b>2.65</b>
Denver	Seattle	6.60	<b>3.00</b>	8.25	<b>4.00</b>
Dallas	New York	8.80	<b>4.00</b>	11.00	<b>5.25</b>
Chicago	San Francisco	11.90	<b>5.00</b>	14.85	<b>6.75</b>
New York	Los Angeles	15.65	<b>6.25</b>	19.55	<b>8.50</b>

\* Night and all-day Sunday rates are still lower.



# \$190,034,000 CONSTRUCTION AWARDS

**C**ONTRACTS let for engineering and building operations in the South during the first quarter of this year total \$190,034,000. Industrial construction of \$72,274,000 led the various types of work. General building for the first time in years assumed second position with a valuation of \$36,557,000, or a gain of 137 per cent over the same kind of work in the first three months of last year, and overshadowed road and bridge construction so far this year by almost four million dollars. The public building program is now 55 per cent behind last year. Sewer and waterworks construction of \$10,628,000 is ahead of last year's first quarter by 19 per cent.

March awards of \$58,863,000 include \$17,245,000 for industrial contracts, \$14,669,000 for general building, \$8,392,000 for roads and bridges, \$7,485,000 for drainage, dredging, levee and similar work, \$7,387,000 for public buildings, \$1,155,000 for sewers and waterworks and \$530,000 for filling stations and garages. Gains in general building, public building, and drainage work over the preceding month were offset by decreases in industrial and highway construction. Dwelling awards, climbing since the first of the year, in March amounted to 59 per cent of the general building total.

Paper mill construction continued in March. Another \$8,000,000 plant for a Southern location not yet announced is to be built by the Southern Kraft Corporation. This latest addition to the South's

## SOUTHERN CONSTRUCTION, BY STATES

States	First Three Months, 1937		March, 1937	
	Contracts Awarded	to be Awarded	Contracts Awarded	to be Awarded
Alabama .....	\$5,929,000	\$45,439,000	\$396,000	\$8,928,000
Arkansas .....	2,648,000	7,713,000	1,043,000	1,258,000
District of Columbia .....	13,455,000	36,239,000	2,884,000	15,708,000
Florida .....	18,857,000	37,763,000	3,871,000	15,939,000
Georgia .....	7,220,000	30,665,000	3,485,000	8,639,000
Kentucky .....	10,499,000	20,622,000	1,358,000	11,409,000
Louisiana .....	5,312,000	33,811,000	2,370,000	11,063,000
Maryland .....	21,707,000	35,721,000	2,853,000	11,786,000
Mississippi .....	8,756,000	49,984,000	5,293,000	23,752,000
Missouri .....	17,194,000	44,849,000	7,650,000	6,223,000
North Carolina .....	13,315,000	58,639,000	3,297,000	12,629,000
Oklahoma .....	4,774,000	21,107,000	1,597,000	3,175,000
South Carolina .....	3,680,000	27,152,000	686,000	18,898,000
Tennessee .....	11,326,000	35,911,000	2,502,000	3,235,000
Texas .....	29,542,000	124,517,000	9,723,000	27,874,000
Virginia .....	11,198,000	40,490,000	6,372,000	12,058,000
West Virginia .....	4,622,000	40,881,000	1,483,000	7,797,000
Total .....	\$190,034,000	\$691,503,000	\$56,863,000	\$200,371,000

paper making capacity makes a total of \$85,000,000 for plants under way or proposed within a period of a little over one year. Expansion of paper manufacturing is rivaled by that of the steel makers who are expending over \$50,000,000 for major projects in Alabama and Maryland. Simultaneously with the growth of Southern steel operations is the expansion in the metal container manufacturing field. St. Louis, Mo., is the scene of the latest additions. The Crown Can Co., a subsidiary of the Crown Cork and Seal Co., announced award for a plant to cost \$3,800,000. Owens-Illinois Can Co., which established a \$300,000 plant at Baltimore, has taken options on a site in the same city for a \$500,000 plant.

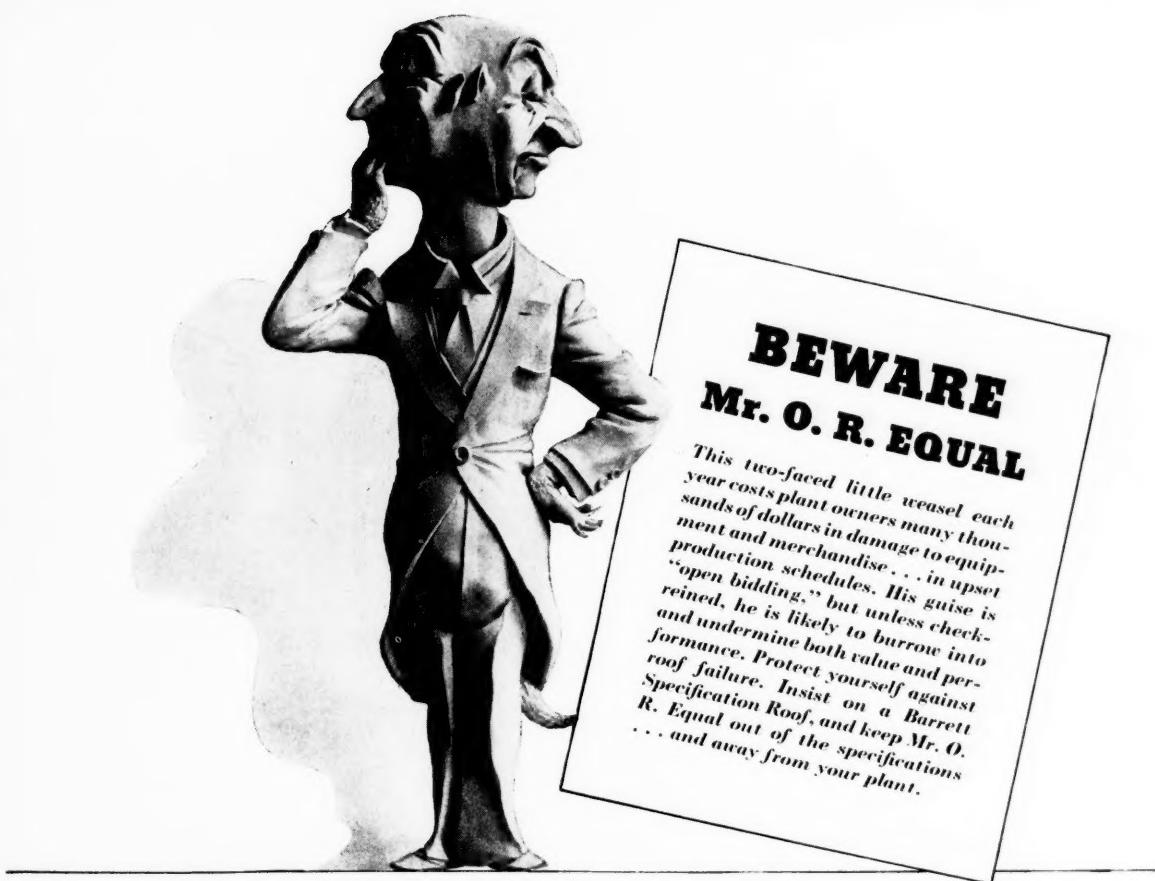
The announcement that the Coca Cola Co. had acquired a site at Dallas, Texas, on which it would build a plant to duplicate the \$800,000 plant proposed for Kearny, N. J. was the feature in the beverage field.

Brewing and distilling organizations also started enlarging their activities. Schlitz Brewing Co., Milwaukee, got ready to establish three \$75,000 bottling plants in West Virginia. Sites were acquired for breweries at Birmingham, Ala., for the Magic City Brewing Co., and at Montgomery for the Fisher Brewing Co. The Montgomery plant will cost \$500,000. The American Brewing Co. at New Orleans is making additions to cost \$200,000. Mobile or Birmingham will be the site of a new brewery to be erected by the Spellman interests of Pensacola, Fla.

Included in the great variety of other expanding plants, especially in the food handling branches, were the \$700,000 sugar plant for George M. Germany and associates at New Iberia, La.; the \$220,000 contracts awarded by the Houston Milling Co. for feed mill, elevator and office addition; the expansions by the Rogers Grain Co., also of Houston; the Stephenville, Tex., plant of the Fort Poultry & Egg Co. and Armour and Co.; the Kettering Baking plant at Fairmont, W. Va.; the Stamford, Ky., cheese plant of the Merchants Creamery Co., Cincinnati; the plant at Atlanta, Ga., to be occupied by the National Food Products Co.; B. B. White Sons pecan processing plant at Daytona Beach, Fla.; White Baking Company's improvements at St. Louis, Mo.; building of McGough Bakeries, Inc. at Montgomery, Ala.; poultry plant of Virginia Egg Producers Corp., at Buena Vista, Va.; Tayste Baking Company's plant at Abilene, Tex.; a plant at New Albany, Miss., for Armour Creameries, Inc.; additional units at Tulsa for the Hawk Ice Cream Co.; a creamery building at Vicksburg, Miss., and others.

## SOUTHERN CONSTRUCTION ACTIVITY, CLASSIFIED

	First Three Months, 1937		March, 1937	
	Contracts Awarded	to be Awarded	Contracts Awarded	to be Awarded
<b>General Building</b>				
Apartments and Hotels ..	\$7,463,000	\$15,040,000	\$2,482,000	\$3,902,000
Association and Fraternal	408,000	1,337,000	60,000	935,000
Bank and Office .....	2,630,000	6,009,000	804,000	4,595,000
Churches .....	555,000	3,073,000	196,000	1,011,000
Dwellings .....	17,773,000	14,077,000	5,578,000	5,965,000
Stores .....	7,728,000	10,468,000	2,549,000	4,520,000
	<b>\$36,557,000</b>	<b>\$50,004,000</b>	<b>\$14,669,000</b>	<b>\$20,928,000</b>
<b>Public Buildings</b>				
City, County, Government and State .....	\$17,359,000	\$78,266,000	\$4,653,000	\$29,368,000
Schools .....	10,399,000	31,573,000	2,734,000	13,563,000
	<b>\$27,758,000</b>	<b>\$109,839,000</b>	<b>\$7,387,000</b>	<b>\$42,931,000</b>
<b>Roads, Streets and Paving ..</b>				
<b>Industrial and Engineering</b>				
Drainage, Dredging and Irrigation .....	\$8,820,000	\$41,814,000	\$7,485,000	\$4,525,000
Filling Stations, Garages, etc. ....	1,242,000	1,859,000	530,000	813,000
Industrial Plants .....	72,274,000	252,414,000	17,245,000	68,264,000
Sewers and Waterworks .....	10,628,000	27,871,000	1,155,000	8,200,000
	<b>\$92,964,000</b>	<b>\$323,958,000</b>	<b>\$26,415,000</b>	<b>\$81,802,000</b>
<b>Total .....</b>	<b>\$190,034,000</b>	<b>\$691,503,000</b>	<b>\$56,863,000</b>	<b>\$200,371,000</b>



## A good place to stop ROOF LEAKS is in the building plans

WHEN you buy a Barrett Specification Roof you buy known quality, known quantities and known application technique to produce a known result.

Mr. O. R. EQUAL does not assure any of these. Instead, he may invite unequal bidding and the use of inferior products and unproved standards. He may cost considerable in maintenance expense and damaged property.

There is no equal to the authenticated service records which have been established by Barrett in the built-up roofing field. Barrett Specification Pitch and Felt are produced to meet exacting manufacturing specifications. Barrett Specification Roofs are applied according to rigid standards by Barrett Approved Roofers who measure up to definite criteria of workmanship, experience and integrity.

Exact building specifications encourage fair bidding practices and promote good construction. They are just as essential as exact manufacturing and application specifications. Why give Mr. O. R. EQUAL a chance to

hedge? The first place to guard against roof leaks is in the specifications . . . a leak there may be a life-long leak . . . one which cannot be repaired.

### THE BARRETT COMPANY

40 Rector Street, New York, N. Y.

2800 So. Sacramento Avenue  
Chicago, Illinois

Birmingham  
Alabama

In Canada: The Barrett Company, Ltd., 5551 St. Hubert St., Montreal, Quebec



Cop. 1937 The Barrett Co.

*The nearest Barrett Approved Roofer may be found in the Classified Telephone Directory under "Roofters."*

## Representative Projects in the South Last Month

### Contracts Awarded

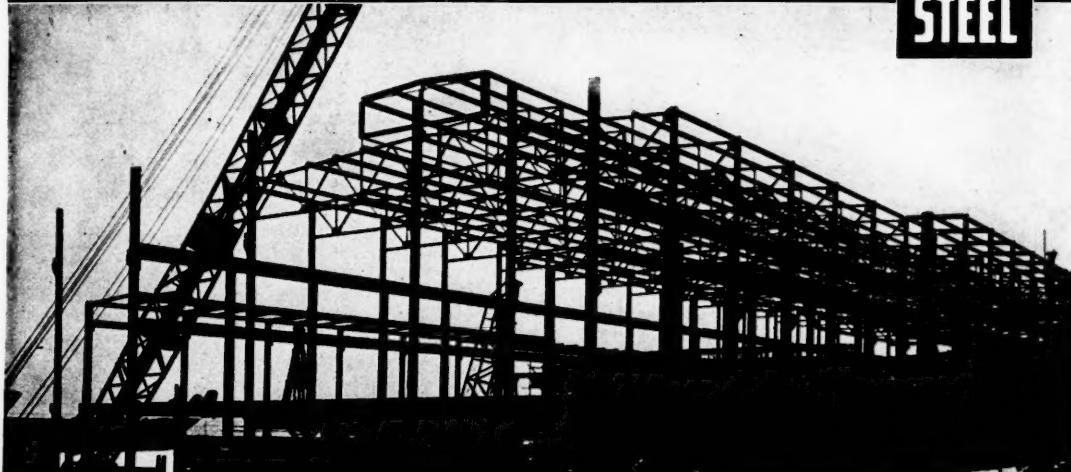
D. C., Washington—District Commissioners Street Work; Wilmoth Paving Co., Contr.	\$113,000
Fla., Jacksonville—Hotel George Washington Air Conditioning; Carrier Engineering Corp., New York, Contr.	100,000
Fla., Miami Beach—Earl Harwick Residence; United Service Corporation, Contr.	100,000
Fla., Panama City—Treasury Department Post Office; Beers Construction Co., Atlanta, Contr.	122,000
Ga., Cordova—Gillespie-Selden Institute School, hospital, chapel; Southeastern Construction Co., Charlotte, N. C., Contr.	100,000
Ga., Ocilla—Rural Electrification Association Electric line; Lee T. Barber, Moultrie, Contr.	119,000
Ky., Frankfort—Department of Highways Bridge (Franklin County); Sandy-Hite Co., Kansas City, Mo., and Bethlehem Steel Co., Bethlehem, Pa., Contrs.	330,000
Ky., Lexington—University of Kentucky Student Union Building; George H. Rommel & Co., Louis- ville, Contr.	154,000
Ky., Owensboro—Ken Rad Tube and Lamp Co. Factory; Hoffman Construction Co., Evansville, Ind., Contr.	200,000
La., Lake Charles—Continental Oil Co. Gasoline Plant	100,000
La., New Orleans—International Harvester Co. Building; Chris Larsen Co., Contr.	125,000
La., Shreveport—Southwestern Gas & Electric Co. Underground electric system; G. N. Gest, Cincinnati, Ohio, Contr.	250,000
Maryland—U. S. Engineer Dredging (Elk River); Gahagan Construction Corp., Brooklyn, N. Y., Contr.	149,000
Md., Baltimore—National Can Co. Addition; Brown and Matthews, Inc., New York, Contr.	150,000
Md., Curtis Bay, Baltimore—Coast Guard Ordnance building; C. W. Schmidt, Contr.	134,000
Miss., Jackson—State Highway Commission Road, (Carroll County); Harrison Engineering Construc- tion Co., Kansas City, Mo., Contr.	3,976,000
Road, (Marshall County); Central Paving Construction Co., St. Louis, Mo., Contr.	172,000
Miss., Sardis—U. S. Engineer Dam; General Construction Co., Seattle, Wash., (low bid- der)	114,000
Missouri—U. S. Engineer Dikes, revetment; W. A. Ross Construction Co., Kansas City	114,000
Mo., St. Louis—Crown Can Co. Can plant; Consolidated Engineering Co., Baltimore, Contr.	3,500,000
Mo., Saverton—U. S. Engineer Power, control, and lighting system, lock and dam 22; E. A. Koeneman Electric Co., St. Louis (low bidder)	106,000
North Carolina—Bureau of Public Roads Road; Leon Ellis, Greensboro, (low bidder)	103,000
N. C., Chapel Hill—University of North Carolina Gymnasium and natatorium; J. A. Jones Construction Co., Charlotte, Contr.	415,000
N. C., High Point—City Grade crossing elimination; William Muirhead Construc- tion Co., Durham, (low bidder)	224,000
N. C., Marlow—Drexell Furniture Co. Plant modernization	750,000
N. C., Shelby—Cleveland County High school; Fowler-Jones Construction Co., Winston- Salem, Contr.	1,268,000
S. C., Greenville—Barringer Hotel Chain Hotel improvements; J. C. Hesley, Columbia, Contr.	300,000
Tenn., Memphis—City Substation; Walker & Michael, Contr.	150,000
Tenn., Memphis—Sears, Roebuck and Co. Plant addition; Foreman-James Co., Contr.	216,000
Tenn., Nashville—Housing Division Slum Clearance project (Andrew Jackson Courts); Central Contracting Co., (low bidder)	142,000
Tex., Dallas—Southwestern Bell Telephone Co. Building; Henger Construction Co., Contr.	859,000
Tex., Dallas—Southwestern Greyhound Bus Lines Garage; Henger Construction Co., Contr.	876,000
Tex., Fort Worth—Treasury Department Boiler House equipment; E. E. Farrow, Dallas, Contr.	1,000,000
Tex., Houston—Houston Milling Co. Feed mill, warehouse, elevators; Telepsen Construction Co., Houston, and Jones-Hettelsater Construction Co., Kansas City, Mo., Contr.	393,000
Tex., Houston—River Oaks Corporation Shopping units; Fretz Construction Co., Contr.	105,000
Va., Danville—City Dam, pipeline, tunnels; Ligon & Ligon, Baltimore, Contr.	147,000
Va., Kecoughtan—Veterans' Administration Hospital Building; Virginia Engineering Co., Newport News, (low bidder)	210,000
Va., Langley Field—National Advisory Committee for Aero- nautics Wind tunnel; Pittsburgh-Des Moines Steel Co., Pitts- burgh, Contr.	163,000
Va., Norfolk—Navy Department Air station buildings; Virginia Engineering Co., Newport News, (low bidder)	50,000
Va., Norfolk—U. S. Engineer Dredging (Inland Waterway); Hill Dredging Co., Vent- nor, N. J., (low bidder)	100,000
Va., Richlands—Clinch Valley Clinic Hospital Hospital; Virgil Stowe, Welch, W. Va., Contr.	100,000
Va., Richmond—Medical College of Virginia Dormitory; William Muirhead Construction Co., Inc., Durham, N. C., (low bidder)	100,000
Va., Waynesboro—Augusta County School; J. C. Senter, Roanoke, Contr.	100,000

### Proposed Construction

Ala., Mobile—City Auditorium addition; Fred Clarke, Archt.	\$125,000
Ala., Mobile—W. A. McInnis Naval Stores Plant	150,000
Ala., Montgomery—Fisher Brewing Co. Brewery	500,000
Fla., Pensacola—Peninsular Telephone Co., Pensacola Construction program	1,000,000
Fla., Miami—Florida National Building Corp. Office Building	2,000,000
Fla., Miami—Miami Transit Company Bus lines	800,000
Fla., Lakeland—Florida Southern College Religious Center	1,000,000
Fla., Miami Beach—City Municipal improvements; Morris N. Lipp, City Engr., Malcolm Pirnie, New York, Consil. Engr.	2,313,000
Ga., Albany—City and Dougherty County Junior High School; Rayburn Webb, Archt.	250,000
Ga., Atlanta—Clark University Building program; James Gamble Rogers, New York Archt.	1,250,000
Ga., Augusta—J. B. White Estate Store Additions; Willis Irvin, Archt.	100,000
Ky., Lexington—Young Mens Christian Association Building	200,000
Ky., Paducah—City Commission Hospital; E. T. Hutchins, Louisville, Archt.	500,000
La., De Quincy—Newport Co. Retort Building	100,000
La., Monroe—City Sewer, electric improvements	1,500,000
La., New Iberia—George M. Germany and Associates Sugar Mill	700,000
La., Shreveport—City Sewer, water improvements	450,000
Md., Baltimore—Sears, Roebuck & Co. Store	1,000,000
Md., Baltimore—South Baltimore General Hospital Addition	250,000
Md., Baltimore—Glenn L. Martin Co. Expansion; Albert Kahn, Inc., Archts., Detroit	2,000,000
Miss., Jackson—Southern Bell Telephone & Telegraph Co. Improvements	200,000
Mo., Clayton—Jess Sprague Apartment; H. S. Van Hoefen, St. Louis, Archt.	115,000
Mo., Kansas City—Fairfield Farms and Investment Co. Industrial Building; Alonzo H. Gentry, Voskamp and Neville, Archts.	600,000
Mo., Poplar Bluff—Board of Education School; Johnson and Maack, St. Louis, Archts.	120,000
Mo., St. Louis—City Hospital; Albert Osburg, Chief Archt.	1,500,000
Mo., St. Louis—Two-Mile Creek Sanitary District Sewer System; W. W. Horner, Engr.	136,000
Mo., St. Louis—Mother of Good Counsel Home for Incur- ables and Sanitarium Hospital; Henry P. Hess, Archt.	250,000
Mo., St. Louis—Owens-Illinois Can Co. Can plant	500,000
N. C., Charlotte—City Waterworks expansion	1,365,000
N. C., Greensboro—Jefferson Standard Life Insurance Co. Apartment Building; Charles C. Hartman, Archt.	400,000
N. C., Winston-Salem—City Hospital; Northup and O'Brien, Archts.	350,000
Okl., Oklahoma City—State Office Building; John Duncan Forsyth, Tulsa, Archt.	1,000,000
S. C., Greenville—City High School; J. E. Sirrine & Co., Engrs.	400,000
Tenn., Gallatin—Sumner County Courthouse	150,000
Tenn., Memphis—Standard Oil Co. Bulk station	110,000
Tex., Anahuac—Chambers County School	210,000
Tex., Corpus Christi—Sexauer Realty and Investment Co. Office Building	3,000,000
Tex., Dallas—C. C. Slaughter Remodeling building; T. J. Galbraith, Archt.	250,000
Tex., Dallas—Coca Cola Co. Plant; Robert & Co., Atlanta, Ga., Engrs.	800,000
Tex., Houston—City Municipal Improvements	4,100,000
Tex., Houston—Southwestern Bell Telephone Co. Exchange and office	300,000
Tex., Houston—Walgreen Texas Co. Store Improvements; John Denhart and F. W. Veesey, Archts.	200,000
Tex., Linden—Cass County Road Program	400,000
Tex., Pecos—Reeves County Court House; Trost & Trost, El Paso, Archts.	120,000
Va., Alexandria—City Schools	277,000
Va., Hopewell—James River Pottery Co. Plant modernization; Harry Griswold, Washington, D. C., Consl. Engr.	100,000
Va., Lynchburg—School Board School; Stanhope S. Johnson, Pendleton S. Clark, Archts.	550,000
Va., Norfolk—City School; Ferguson, Meakin and Moore, Archts.	100,000
Va., Richmond—Virginia Library Building Commission Library; Carneal, Johnston & Wright, Archts.	1,000,000
Va., Waynesboro—Waynesboro Hotel Corp. Hotel	100,000
W. Va., Clarksburg—Monongahela-West Penn Public Ser- vice Co. Distribution line improvements	115,000

**Increase your profits with**

**J&L  
STEEL**



Above: Steel for this new plant of the Union Bag & Paper Corporation, at Savannah, was furnished by Jones & Laughlin.

Left: Air view of the Jones & Laughlin Warehouse at New Orleans.

## **J&L Warehouses serve the new industrial South ... with steel in the form to meet regular or emergency needs**



Jones & Laughlin renders a complete, convenient steel service to the new industrial South . . . ade-

quate to materially aid its growth and prosperity. To build requires steel . . . and J&L stands ready to supply this need for steel . . . to fabricate for construction . . . to supply all maintenance and manufacturing requirements.

Jones & Laughlin has been making high quality iron and steel prod-

ucts for eighty-seven years. J&L Warehouses, large and splendidly equipped for cutting, welding, forming, fabricating and handling, are located at New Orleans, Cincinnati and Pittsburgh. Practically all requirements for steel products can be met from the large and diversified stocks carried at these points. The J&L Warehouse at Memphis operates a bar-fabricating shop, and carries large stocks of oil country tubular goods, standard pipe, sheets,

hot rolled bars, spikes, wire products and reinforcing bars. Mill service, and J&L Metallurgical consultation service on your problems are available through offices in these and other cities.

You will find that you secure the right steel . . . avoid costly delays and satisfy your requirements *on time*.

Buy steel from J&L Warehouses.

### **SERVING THE SOUTH**

*Sales Offices:* Atlanta, Cincinnati, Memphis, New Orleans, Philadelphia, Pittsburgh.

*Warehouses:* Cincinnati, Memphis, New Orleans, Pittsburgh.

**JONES & LAUGHLIN STEEL CORPORATION**

PITTSBURGH, PENNSYLVANIA

MAKERS OF HIGH QUALITY IRON AND STEEL PRODUCTS SINCE 1850

APRIL NINETEEN THIRTY-SEVEN

# IRON, STEEL AND METAL MARKET

**C**ONTINUED increasing activity in the iron and steel industry brought the operating rate above 90 per cent of capacity at the end of March which was approximately 25 per cent ahead of a year ago. Orders during March were 40 per cent above February despite price increases ranging from \$3 to \$8 a ton. Growing demand for heavy goods requirements and wage boosts have been held responsible for the rise in price.

With the weekly average ingot output estimated within 24,500 tons of the all-time high weekly average of 1,193,284 tons set in May, 1929, many producers look forward to near-capacity operation for six months. Steel ingot output for the first quarter of this year averaged about 86 per cent of capacity compared with 55 per cent in the like 1936 period. Production during February was rated at 84.4 per cent of capacity by the American Iron and Steel Institute, with calculated weekly output at 1,106,165 tons for all companies.

## Pig Iron and Scrap Advances

The scrap iron market has maintained its activity with increased foreign demand that has caused concern in the United States as to the drain on supplies for domestic use. Scrap prices have been at \$23 and \$23.50 a ton, but dropped 50 cents a ton last week. Advances from \$2 to \$3

per ton were made in pig iron early in March. February pig iron production reached 79.5 per cent of capacity, the best since October, 1929.

## More Expansions

Despite labor disturbances, expansion programs are being undertaken in many steel producing regions. Following the development started some weeks ago in the Southern region by the Tennessee Coal, Iron and Railroad Company and the Bethlehem Steel Company, the American Rolling Mill Company is adding to the facilities of its subsidiary, the Sheffield Steel Corporation at Kansas City, Mo. Many steel companies have been adding to blast furnace capacity and enlarging sheet making facilities, including a cold rolled strip mill in Toledo for the Fort Pitt Steel Company; the Youngstown Sheet & Tube Company will put into service two more blast furnaces placing it on a 100 per cent capacity basis; the Carnegie-Illinois Steel Corporation will add a new strip and sheet mill in the Monongahela district. Other developments include the recapitalization of the Worthington Pump & Machinery Corporation; the approval of the merger between the Republic and Gulf States Steel companies has been announced by the Board of Directors of both companies. With the increased activity, earnings of iron and

steel companies are expected to be substantially in excess of last year. The American Rolling Mill Company reported the largest sales in 1936 in its history, reaching \$101,463,000 as compared with \$70,434,000 in 1929. Its net profit for 1936 of \$6,446,000 was \$2.73 a share as compared with \$2.41 in 1935.

## Southern District Active

Southern steel production reached an 8-year peak, going above 80 per cent of capacity. Wage boosts were announced by many companies, the wage increase averaging about 12 per cent estimated to add \$4,000,000 to the Birmingham district's annual pay roll. Business in this area is reported as better than at any time since the World War. Prices were advanced on iron and steel products in the Birmingham district during the latter part of March.

Base Prices Delivered F. O. B. Mill	
Standard rails, Ensley, Ala. (gross ton) .....	\$42.50
Angle Bars for Standard Rails Fairfield, Ala. (Cwt.) .....	2.80
Base prices Delivered F. O. B. Birmingham in lots of 25 net tons	
Merchant Bars and Small Shapes	
Cwt. ....	2.625
Standard Structural Shapes, Cwt. ....	2.425
Plates, Cwt. ....	2.425
Reinforcing Bars, New Billet, Cwt. ....	2.60
Wire Nails, Cwt. ....	2.925
Standard Spikes, Cwt. ....	3.175
Track Bolts, Cwt. ....	4.375
Tie Plates, net ton ....	46.50
Light Rails, gross ton ....	43.00
Pig Iron No. 2 Foundry, gross ton plus \$5.80 per car for switching....	20.38

## International Steel Conference Cancelled

Due to the pressure of business, combined with emergency work necessary in Europe, the Sixth International Congress for Steel Development, scheduled to meet in New York the last week in June, has been cancelled. This step was taken at the request of the steel industries abroad.

## Lead, Copper, Zinc

Lead prices dropped \$1 a ton the third week in March, following the opening of May books. Stocks at the end of February had fallen from 169,776 tons in January to 156,832 tons. Shipments rose from 45,718 tons for January to 50,375 tons, as reported by the American Bureau of Metal Statistics.

Tinplate production for last year was reported 36,000 tons over 1935. World tin consumption was estimated at 18.4 per cent above the previous year. Domestic copper price was 17 cents at the end of March. World supplies of copper declined 6,024 tons in the first two weeks of March. Domestic supplies fell 4,349 tons.

## PROMPT DELIVERIES FROM STOCK (Standard Sizes)



**ORIOLE**  
**GALVANIZED**  
**STEEL SHEETS**  
**Flat-Corrugated-Roofing**

**THE EASTERN ROLLING MILL CO.**

BALTIMORE, MARYLAND

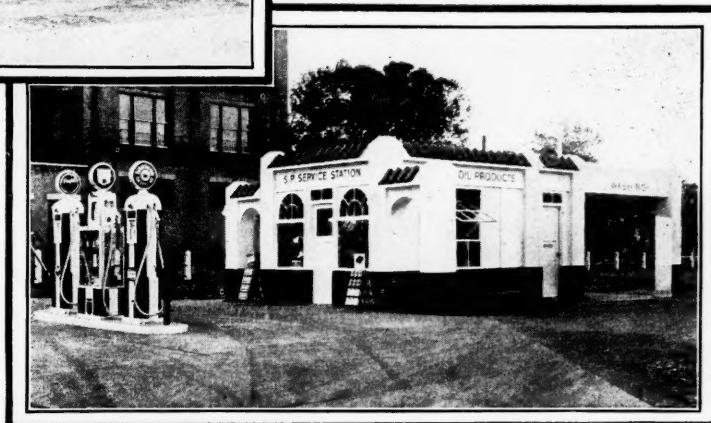
District Office, Petroleum Bldg., Houston, Tex.

# The Most Serviceable of Service Stations



Two service-stations at El Paso,  
Texas, fabricated entirely with  
GULFSTEEL SHEETS

These stations were fabricated  
and erected by HILLS-SUTTON  
COMPANY of El Paso, Texas



The advantage to which sheet metal may be used in service-station construction, to achieve any architectural effect desired, is shown in the two photographs above. In this instance, the Spanish type of architecture, even to the Spanish Tile roofs, is faithfully reproduced, at low cost, in Gulfsteel Sheets.

These two stations, fabri-

cated entirely of Gulfsteel sheets by the Hills-Sutton Company, are but two of a great many fabricated by this progressive concern...Construction of this kind requires the highest grade of steel sheets, in order to meet, without breaking, the severe distortion required in forming. And that's why Hills-Sutton chose GULFSTEEL SHEETS.



GULF STATES STEEL COMPANY, BIRMINGHAM, ALABAMA

# GULFSTEEL SHEETS

# LUMBER NEWS

---

# OF THE MONTH

## SOUTHERN FOREST RESOURCES

**S**OUTHERN forests represent a natural resource of immense value which, under proper management, will renew itself, and which is capable of yielding even greater volumes of forest products in the future, is the opinion of E. L. Demmon, Director, Southern Forest Experiment Station, New Orleans. The importance of the South's forests as a source of pulpwood and naval stores was stressed in a discussion of "Economics" of Our Southern Forests," by Mr. Demmon before the recent economic conference at Rollins College, Winter Park, Fla. If these forests are to supply the future needs of the present and prospective pulp and paper mills as well as other wood-using industries in the South, he points out it is particularly important that the forest capital or growing-stock be built up, that adequate fire protection be provided, and that conservative cutting practices be generally adopted.

### \$2,000,000,000 Value

Recently completed by the Southern Forest Experiment Station, as a regional forest research unit of the U. S. Forest Service, was a field inventory of the forest resources on an area of 216,000,000 acres, in nine Southern States. Of the total land area of the South, nearly 237,000,000 acres, 60 per cent, or slightly more than 140,000,000 acres, is forest land. Total value of the forest land, timber, and the forest-products utilization plants in the South is conservatively estimated at nearly two billion dollars.

As a source of tax revenue, it is estimated that the South's forest land and timber represent nearly 10 per cent of its assessed valuation of all property. The assessed value of this forest land and timber in 1935 was about \$450,000,000, the equivalent of \$3.21 an acre.

Eight per cent of the value of all manufactured goods of this region was represented by the value of all products derived from Southern forests, including lumber and timber, cooperage and wooden boxes, naval stores, wood distillates, charcoal, pulpwood and other products of wood-using industries.

Of all industrial wage-earners in the nine States covered by the inventory, 22 per cent, according to the Census figures for 1933, were employed in forest industries. The total number so employed was 209,044, of which figure woods workers totalled 122,405, and mill workers, 86,639. In addition, about 150,000 men are engaged in cutting fuelwood and other forest products.

The prophecies of foresters and others that within 10 or 20 years most of the commercial timber in the South would be gone, while true for limited areas, does not hold true for the South as a whole, Mr. Demmon stated. These prophecies did not take into account the recuperative powers of the cut-over forest lands of the South, influenced as they are by

### Future Supply for Expanding Wood-Using Industries As- sured Under Proper Timber Management Methods

soil and climatic conditions exceptionally favorable to forest growth. Though haunted by the ghosts of devastated forest land, and abandoned mill towns, the South can look forward to a new timber crop, which if properly managed, will support most of its present forest industries, and many new units, perpetually.

### Perpetual Pulpwood Supply

As to the capacity of the South to supply the domestic demand for wood-pulp, Mr. Demmon said:

"Approximately 55 per cent of our domestic pulp and paper needs are now imported, chiefly from Canada and the Scandinavian countries. The present annual consumption of pulpwood equivalents in the United States is approximately 14,000,000 cords. A possible total future national requirement of 25,000,000 cords annually can be used as a basis for estimating the contribution which the different forest sections of the United States can make in supplying this need, and still conserve the Nation's forests."

For immediate conversion the South has at least 250,000,000 cords of pulping species. Annual growth is around  $\frac{1}{3}$  cord per acre per year. At this rate, on the 140,000,000 acres of Southern forest land there are now being produced about 47,000,000 cords annually. Approximately three-fourths of this is in pulping species, or a total of approximately 35,000,000 cords.

### Naval Stores

From an area of 34,000,000 acres of land comes all the gum and rosin produced in the United States, the annual output of which is valued at about \$50,000,000. In the naval stores belt the longleaf and slash pine trees predominate. In this belt, the survey showed 1,800,000,000 of these two species of trees 2 inches or more in diameter which have not been worked for naval stores. Most of these (1,225,000,000 trees) are under 6 inches in diameter. It is calculated, however, that sufficient trees will reach turpentining size, (8 to 9 inches in diameter) each year to permit 24,000,000 new trees to be brought into turpentining annually if the owners dedicate them to this use.

In the naval stores belt as a whole, the ratio that annual replacement bears to the total working body of faces approximates 1 to  $8\frac{1}{2}$ . Applying this ratio to the

indicated annual income of 24,000,000 new faces on fresh trees, it is estimated that a working body of 200,000,000 faces (20,000 crops of 10,000 faces each) can be maintained in continuous production. Expressed in more common terms, it is possible to increase the annual production of gum turpentine by 300,000 barrels, and the annual production of rosin gum by 1,000,000 barrels.

Also, forests have an important regulatory influence on streamflow and groundwater, and serve effectively to prevent soil wastage and flood damage, and they are destined to become even more important in the future for recreation and the production of game.

### Firm Lumber Demand

Lumber prices have been rising and new orders continued strong with production heavy. Unfilled orders are 50 per cent larger than a year ago, reports the National Lumber Manufacturers Association.

The possibility of Federal regulation of hours and wages and conditions of employment in the lumber industry was the most important question to face the 22nd annual meeting of the Southern Pine Association in New Orleans last week. Lumber production in the territory during March has been above the output of March, 1936, but orders and shipments have been running below last year's figures.

During the latter part of March orders were 10 per cent under the corresponding period of last year and shipments showed a decrease of 11 per cent. Total stocks on hand March 27 were 358,749,000 feet, or 80 per cent of normal and 13 per cent below a year ago.

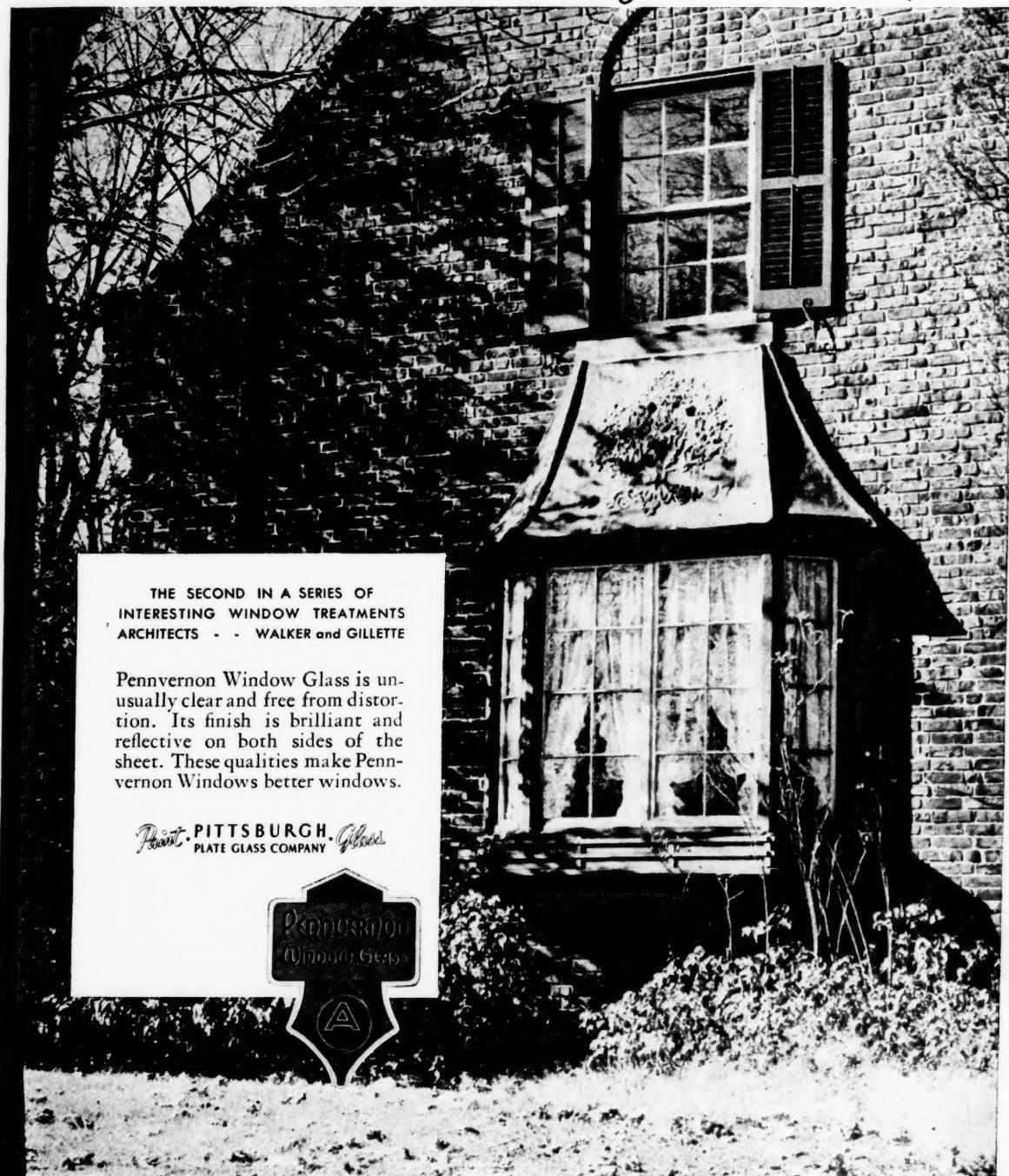
### Sawtimber and Pulpwood in Mississippi

**A** PRELIMINARY report by the Southern Forest Survey of the sawtimber and cordwood volumes in central and southwestern Mississippi shows an estimated total of 47,285,000 cords of woods of pulping species over six inches in diameter. The report, made by I. F. Eldredge, regional survey director for the Mississippi area, covers a survey of 10,799,500 acres, of which 56 per cent is in some stage of forest growth, or a total forest area of 6,026,400 acres. Sixty-five per cent of these acres is in pine and pine-hardwood.

Of sawtimber pine trees that will yield at least one usable 12-foot log, the minimum breast-high diameter being 9 inches, there is an estimated total of 6,191,300 board feet. Of sawtimber in gum, cottonwood, maple, oak, elm, and hickory and so forth, there is an estimated total of 5,232,200,000 board feet. As the survey proceeds these figures will be subject to correction and amplification.



## Use Pennvernon . . . not just window glass



THE SECOND IN A SERIES OF  
INTERESTING WINDOW TREATMENTS  
ARCHITECTS - - WALKER and GILLETTE

Pennvernon Window Glass is unusually clear and free from distortion. Its finish is brilliant and reflective on both sides of the sheet. These qualities make Pennvernon Windows better windows.

Pennvernon  
PITTSBURGH  
PLATE GLASS COMPANY



# GOOD ROADS AND MOTOR TRANSPORT

## Alabama to Vote on Road Fund Diversion

**A**LABAMA'S Governor Graves has signed a bill prohibiting diversion of highway fund for any purpose not immediately connected with the building, re-building, maintenance and supervision of public roads highways, streets and bridges. Voters in the State will have an opportunity to act on the measure as an amendment to the State constitution at the next general election in November.

## Economical Transportation Essential to Industrial Progress

**S**MALL businesses, branch and main factories must have good transportation facilities in these days of keen competition. Many communities are dependent on motorized transportation. Without the economical movement of goods there can be no industrial progress. Advanced methods of quantity production, skilled engineering and sound business management mean nothing unless the products of industry have easy access to markets. Haulage by trucks and truck-trailer units have made possible the successful operation of many businesses and enable industries to locate in areas heretofore considered inaccessible to markets and raw materials.

Factory owners and others in the South, recognizing the importance of good roads and adequate motor transport facilities for the economical movement of their products, realize the necessity of uniform highway regulations. But they also realize that highway regulations in many Southern states now existing on trucks and truck-trailers are proving a hinderance in furthering development. Permission to haul reasonable loads over

International tractor and Fruehauf trailer unit used for transporting canned foods from small factories located in Virginia to main warehouse in Richmond

the highways will cut the cost of transportation which is a substantial item in the cost of every article, from the raw to the finished product whether from the farm or factory. It will mean greater profits for the farmer and business man and lower living costs to the consumer.

## Progress Being Made Against Tax Diversion

**I**N twelve states consideration is being given the prohibition of gasoline tax diversion for any purpose but road construction and maintenance. In four states, Colorado, Kansas, Minnesota and Missouri, definite steps have been taken through the passage of constitutional amendments outlawing the use of gasoline taxes for any but road purposes.

A nine-lane traffic jam, 8,600 miles long, or long enough to encompass the United States, would occur if the more than 28,000,000 motor vehicles in the nation were to be packed on one road, bumper to bumper. "Such a super highway could actually be built," says Mr. Charles M. Upham, engineer-director of the American Road Builders' Association, "if all the money collected in gasoline tax revenues and then diverted to other purposes during the last five years could be gathered together. It would seem that while legislation to date affects less than 25 per cent of the total number of cases, the efforts of the American Road Builders' Association in fighting against the evils of diversion have at least begun to bear fruit, and even if a nine-lane super roadway is presently out of the question, there are existing today thousands of places immediately in need of good and safe two-lane highways."

## Underground Garage

**A**AS a means of relieving traffic congestion, Birmingham, England, it is stated, is to construct in the center of the city an underground garage to accommodate 1,280 motor vehicles. Eight acres of parking space is provided in the scheme which is to cost over \$1,725,000. The value of the garage as an air-raid shelter is regarded as important.

## Higher Load Limit Refused Texas Truck Operators

**T**EXAS' House Committee on Highways and Motor Traffic reported unfavorably on the highly controversial motor transport load limit revision bill by a vote of 11 to 5, snuffing for the time at least efforts of Texas truck operators to boost the truck load limit. Since early February truck operators in the Lone Star State have endeavored to get the motor transport load limit law increased from the present 7,000 pound minimum figure to 10,000 pounds for one class of trucks, and to 14,000 pounds for a class specially equipped with safety devices.

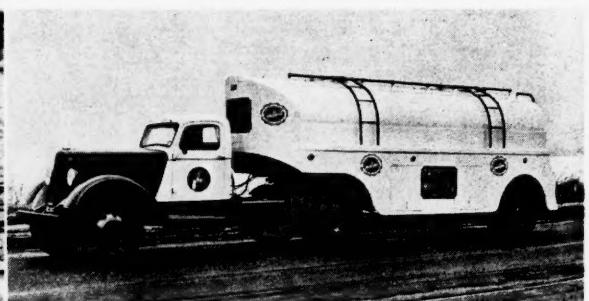
## Erosion Control Will Be Used on Highways

**E**ROSION control measures developed for farm lands will be used to protect sections of State and Federal-aid highways this year under plans being worked out between 19 State highway departments, the Bureau of Public Roads and the Soil Conservation Service. Uncontrolled soil erosion also increases maintenance costs on Federal-aid roads, according to officials of the Bureau of Public Roads.

Under the proposed program, State and Federal officials will select short stretches of right-of-way along highways within the boundaries of Soil Conservation Service areas. The Service will furnish technical supervision, labor and necessary planting materials. The State will supply construction material and equipment, and to maintain the work for five years.

Actual operations to protect highway cuts and fills, highway ditches, and drainage structures, have been started in some of the 19 states, says H. H. Bennett, Chief of the Soil Conservation Service.

Milk transported by this Dodge tractor and Fruehauf tank-trailer is sealed under vacuum and daily travels a distance of 100 miles to supply Baltimore





## How many miles do you take out of your *Tire Package?*

**STRONGER**—All plies are *full* plies anchored at the bead—no floating “breaker strips”—every inch and every ounce is there for just one purpose—to produce more miles and a lower cost for you.

**COOLER**—They flex uniformly without that heat-producing “hinging action” of ordinary breaker-strip tires. Heat kills the life of cords and cuts down the miles in a tire. Generals are *cool*—that’s why they run more miles at a lower cost for you.

**“COMPACT RUBBER” TREADS**—All tires stretch due to fatigue in the fabric, but Generals, having no idle, half-way plies, stretch least of all. The tread is kept compact and compressed against the road—that’s why it produces more miles and reduces your cost.

● The value of any package of merchandise cannot be determined except through use. Tires, too, are packages—packages of mileage.

The cost of your tire package can never be determined until the mileage of that tire is run. The initial price is unimportant. To determine cost you must divide

price by mileage.

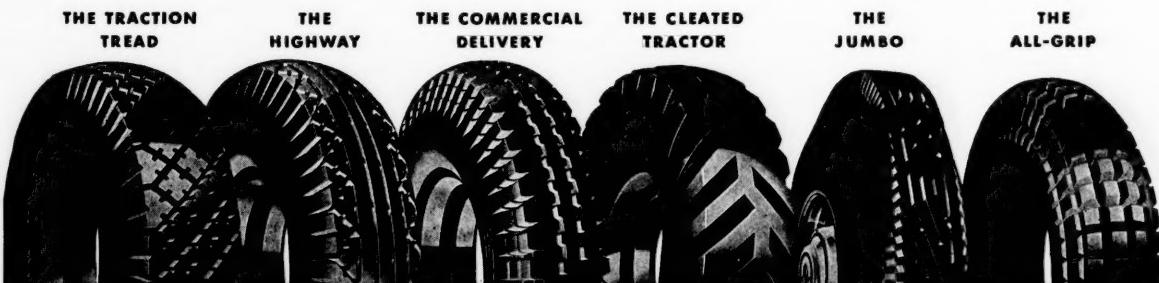
It costs more to build a General Truck Tire because of the way it is built. Thousands of truck operators know it costs less to use Generals because of the way they perform.

General Truck Tires have always been built stronger, to do their work

better and deliver greater mileage.

Your General Tire dealer offers you the benefit of his factory-training and practical truck tire knowledge. He may be able to reduce your tire costs materially.

**THE GENERAL TIRE & RUBBER CO., AKRON, O.**  
In Canada — The General Tire and Rubber Co. of Canada, Limited, Toronto, Ontario



One of the most complete lines in the business—each tire built to give you more miles for less money

# GENERAL TRUCK TIRES

# EQUIPMENT

## NEW AND IMPROVED

### ARMCO Stainless Steel Shovel Blades

That stainless steel is constantly widening its scope of application is attested by the announcement that it is now being used for the blade of a new kind of shovel manufactured by Ames-Baldwin-Wyoming Company, of Parkersburg, W. Va. This shovel is designed for handling chemical or chemically treated products, and is also recommended for handling coal and coke sprayed with calcium to keep the dust down. Armco 18-8 hot rolled strip pickled stainless steel, manufactured by The American Rolling Mill Company, Middletown, Ohio, is being used. Three types of shovels, all with No. 2-B finish stainless, including hollow back, round, and square point, are offered by the company.

### Novel Transfer System for Overhead Cranes

For moving loaded overhead cranes from one bay to another, a novel transfer system has been installed in the Detroit plant of the American Blower Corporation. The installation consists of four units, two of which are standard overhead travelers moving up and down the working bays, while the other two are transfers traveling at right angles along both ends of the building. Through ingenious arrangement, heavy machinery units in process of fabrication in the main working bays are lifted by the overhead cranes which travel to the end of the runway where the entire cranes with their loads are picked up by the transfers traveling at right angles, and thus transferred to adjoining bays for the next steps in production. The system may be applied to as many bays as desired by extending the length of the transfer crane runway. Main bay cranes are P & H 5- and 10-ton capacity units, operating on runways 364 feet long, while the transfer cranes, of 25-ton capacity, travel 120 feet across the ends of the building. To take still further advantage of the unique system, depressed railroad tracks, running below

P & H Crane Installation in American Blower Plant



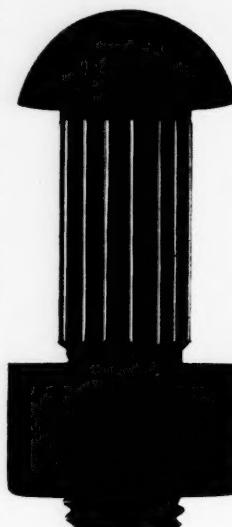
and parallel with the transfer crane runways, facilitate loading and unloading freight cars. The system is the result of collaboration between plant engineers of American Blower Company and the consulting engineers, Albert Kahn, Inc., Detroit. The system, with interlocking details and wiring circuits to match properly the crane and transfer operations, was installed by the Overhead Crane Division of Harnischfeger Corporation, Milwaukee, Wis.

### Rib Bolt with ANCO-NUT

As a practical substitute for riveting, the Automatic Nut Company, Inc., Lebanon, Pa., has introduced the "Structural Rib Bolt" for use with Anco-Nuts, to be used in the construction of buildings, bridges, tanks, towers, ears, etc. Both the bolt and nut have U. S. Standard threads and may be galvanized without affecting the locking feature. The only equipment necessary for erection is a hand hammer and wrench, the bolts being put on in the ordinary way and cannot work loose because of a locking pin which travels between the threads. Anco-Nuts, however, may be removed by an ordinary wrench by exerting sufficient pressure. This moves the pin automatically to a slightly different angle and removes its ratchet action, permitting the nut to be loosened.

### Brunorizing Method for Treating Steel

By a new method of heat treating steel rails, developed by engineers and metallurgists of the Carnegie-Illinois Steel Corporation, largest subsidiary of the United States Steel Corporation, it is declared that the grains of the steel are made finer, stresses in the rail lessened, toughness increased, conditions set up which make possible a uniform end hardening, and the ductility of the steel greatly increased. Known as the Brunorizing Process, it consists of heating steel to above its critical temperature and then cooling it in air, the name applied to the process being that of Normalizing. The Brunorizing furnace at Gary, Ind., was recently dedicated.



### Shear for Cutting Flat Steel Bands

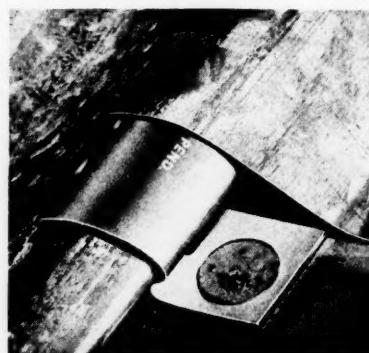
Designed particularly for shippers and receivers who are confronted with the problem of unpacking heavy shipments bound with steel strap, a simply operated tool developed by Acme Steel Company, Chicago, Ill., is declared to be very efficient. The new shear, recently introduced, cuts  $\frac{3}{4}$ -inch and  $1\frac{1}{4}$ -inch bands easily and quickly, the leverage produced by the toggle action of the handles making the last portion of the cut as easy as the first. Scientifically designed to prevent fatigue on the part of the operator, the stationary handle protects the hands, while a single stroke of the upper handle makes a clean square cut. Sheared ends of the band remain flat, and curling and uneven edges are eliminated. The flat lower jaw of the shear slides under the taut band holding the cutting edge in a level, even position until the cut is completed. The tool is known as the Acme No. 10 Shear.

### New Atlas Valve

The Atlas Valve Company, Newark, N. J., makers of regulating valves for every service, announce an improved Type "E" Forged Steel Body High-Pressure Reducing Valve for oil as well as water and air.

### Interlocking Corrugated Roofing Sheet

An interlocking corrugated sheet for roofing and siding declared to defeat capillary attraction and eliminate nail holes and leaks has been introduced by The Kor-Lok Company, Union Trust Building, Cleveland, Ohio. An inexpensive machine furnished Kor-Lok exclusive dealers crimps the sides of ordinary corrugated sheets, forming an unusual interlocking joint. Sheets are held fast by a small clip that fits snugly over the curvature along the side of the bottom sheet. In position, it is nailed to the wood deck and the top sheet slid over it into position. The Kor-Lok Company, organized by Harry R. Ansel, mechanical and structural engineer, has acquired United States and foreign patent rights for the Kor-Lok joint.



# new CHEVROLET TRUCKS 1937

## and Commercial Cars



### NEW UNEQUALED ECONOMY FOR FLEET OWNERS plus the greatest pulling power in the low-price range

#### More Load Space and Improved Load Distribution haul more goods at lower cost



FOR ECONOMICAL  
TRANSPORTATION

Whatever your haulage or delivery requirements may be, there are many reasons why new 1937 Chevrolet trucks or commercial cars will do your job more to your satisfaction than any other units you have ever owned.

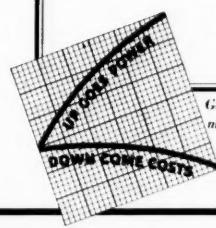
If you need power—the new Chevrolet High-Compression Valve-in-Head Engine supplies it . . . the greatest pulling power of any truck in the low-price field! It is economical power, because Chevrolet truck engine design is based upon gasoline and oil saving principles. It is durable, long-life power, because every part and feature of Chevrolet trucks is ruggedly built to withstand hard, continuous service.

Chevrolet trucks and commercial cars bring you extra savings with Increased Load Space and Improved Load Distribution. This allows bigger loads per trip and higher earnings per unit. Perfected Hydraulic Brakes are safer, smoother, and far more economical to maintain.

Examine the new lines of Chevrolet trucks and commercial cars. In every feature and detail, including their new and smart Steelstream Styling, they offer new value and new economy to fleet owners.

CHEVROLET MOTOR DIVISION, General Motors Sales Corporation, DETROIT, MICHIGAN

**PERFECTED HYDRAULIC BRAKES** (with Double-Articulated Brake Shoe Linkage). The smoothest, most efficient, and most dependable brakes ever built • **NEW HIGH-COMPRESSION VALVE-IN-HEAD ENGINE**. Giving even greater pulling power—even greater economy—in an unequalled combination • **MORE LOAD SPACE—IMPROVED LOAD DISTRIBUTION**. Bigger loads per trip—higher earnings per truck • **NEW STEELSTREAM STYLING**. Making Chevrolet trucks for 1937 "the best-looking trucks on the road." • **IMPROVED FULL-FLOATING REAR AXLE WITH NEW ONE-PIECE HOUSING** (on 1½-Ton Models). Super-strong—super-sturdy—built to give many thousands of miles of dependable service.



General Motors Installment Plan—  
monthly payments to suit your purse.

## "MORE POWER per gallon LOWER COST per load!"

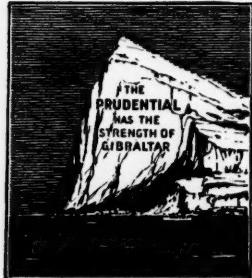
# SIGNIFICANT

is the steady gain  
in total volume of

# GROUP INSURANCE

The benefits disbursed  
demonstrate its merit.

Employers furnished with pertinent facts.



## THE PRUDENTIAL INSURANCE COMPANY OF AMERICA

EDWARD D. DUFFIELD, President  
HOME OFFICE, NEWARK, N. J.

## FINANCIAL NEWS

### Labor and Capital

**W**HETHER right or wrong in what it asks Capital to do, Labor will never gain sympathetic public consideration by methods of violence that are contrary to law and common sense.

A proper and fair solution will be found in consideration and counsel and not by methods which are abhorrent to law abiding people and injurious to the very cause to which misguided labor leaders are supposed to be devoted.

Unfortunately, sit-down strikes have spread like wild fire because of the sympathy of law enforcing authorities, or at least because of their studied inaction.

### The Bond Market

**A**SUBJECT of interest to security holders is whether the advance in the price of shares has been due to better business now and better prospects for the future, or how much of it is due to thoughts of inflation to come.

Basic industries are making marked progress. Their output has jumped to high figures. Their earnings are probably somewhat in proportion, although taxes will undoubtedly have to be figured on as increasing if the government budget is to be balanced, and taxes of various kinds are already high.

Banks have been giving thought to the recent decline in government bonds. It is estimated that banks hold probably 50 per cent or more of the total amount of governments that are outstanding.

While this decline was going on, stocks also declined to some extent, which presented an unusual situation. Opinions differ as to what the course of the bond market may be. It depends on the viewpoint.

### Serving the Public

**O**NE of the striking facts in the 92nd annual statement of the New York Life Insurance Company appearing on the opposite page, is that the Company paid over \$199,000,000 to policyholders and beneficiaries in 1936. At the end of last year it had 2,722,956 policies in force, while policyholders were protected to the extent of \$6,660,968,000.

In 1936, the New York Life wrote \$451,000,000 of new business and received \$46,000,000 from men and women for annuities.

The strong financial position of this mutual company, founded in 1845, is given in the list of its assets which amounted to \$2,404,236,000 on December 31, 1936. Approximately 18 per cent of its assets are in United States government bonds, 13 per cent in railroad bonds, 16 per cent in first mortgages on city property, 15 per cent in policy loans, nearly 9.5 per cent in state, county and municipal bonds, 8.98 in public utility bonds, 1.12 in industrial and other bonds, and 3.5 per cent in preferred and guaranteed stocks. Real estate owned by the company represents 5.27 per cent of its assets.

### Is Prosperity to Endure?

**H**OW long will prosperity last is a question frequently asked. One phase of it, which is bringing profit to many, is the rush for armaments. Japan, Italy, Germany and England, the great powers of Europe, and Asia

(Continued on page 62)

# NEW YORK LIFE INSURANCE COMPANY

A MUTUAL COMPANY FOUNDED IN 1845  
INCORPORATED UNDER THE LAWS OF THE STATE OF NEW YORK

The management of a life insurance company is one of the great assets which never appears in its balance sheet. The New York Life Insurance Company is actively managed by its Board of Directors who represent the 2,000,000 policyholders of this mutual company. Every Director serves on at least one of five general Committees

which meet regularly to supervise the Company's operations. The Directors devote their experience, their judgment, and the necessary time to this work in the interest of the millions of people protected by this cooperative, non-profit institution. The following men constitute this Board of Directors:

**ALFRED L. AIKEN**  
*President*  
**JAMES ROWLAND ANGELL**  
*President, Yale University*  
*New Haven, Conn.*  
**NATHANIEL F. AYER**  
*Treasurer, Cabot Mfg. Co. (Textiles)*  
**ARTHUR A. BALLANTINE**  
*Lawyer, Root, Clark, Buckner & Ballantine*  
**CORNELIUS N. BLISS**  
*Member of the Board,  
Bliss, Fabian & Co.*  
**HENRY BRUÈRE**  
*President, Bouery Savings Bank*  
**MORTIMER N. BUCKNER**  
*Chairman of the Board,  
New York Trust Co.*

**THOMAS A. BUCKNER**  
*Chairman of the Board*  
**NICHOLAS MURRAY BUTLER**  
*President, Columbia University*  
**CHARLES A. CANNON**  
*President, Cannon Mills Co.,  
Kannapolis, N. C.*  
**GEORGE B. CORTELYOU**  
*Former Secretary of the  
Treasury of the United States*  
**WILLIAM H. DANFORTH**  
*Chairman of the Board,  
Ralston-Purina Co.,  
St. Louis, Mo.*  
**ROBERT E. DOWLING**  
*President, City Investing Co.*

**JAMES G. HARBORD**  
*Chairman of the Board,  
Radio Corporation of America*  
**CHARLES D. HILLES**  
*Resident Manager, New York State,  
Employers' Liability Assurance Corp.*  
**HALE HOLDEN**  
*Chairman of Southern Pacific Co.*  
**HERBERT HOOVER**  
*Former President of the United States  
Palo Alto, California*  
**PERCY H. JOHNSTON**  
*Chairman of the Board,  
Chemical Bank & Trust Co.*  
**WILLARD V. KING**  
*Retired*

**GERRISH H. MILLIKEN**  
*President,  
Deering, Milliken & Co.*  
**EDWARD L. RYERSON, Jr.**  
*Vice-Chairman,  
Inland Steel Company  
Chicago, Ill.*  
**ALFRED E. SMITH**  
*President,  
Empire State, Inc.*  
**J. BARSTOW SMULL**  
*Vice-President,  
J. H. Winchester & Co.*  
**PERCY S. STRAUS**  
*President,  
R. H. Macy & Co., Inc.*  
**RIDLEY WATTS**  
*Director,  
Chemical Bank & Trust Co.*

## A BRIEF DIGEST OF THE 92d ANNUAL STATEMENT DECEMBER 31, 1936

### ASSETS

	Per Cent of each item Total Assets
<b>Cash on Hand, or in Bank.....</b>	<b>\$61,082,294.13</b>
United States Government, direct, or fully guaranteed, Bonds.....	440,280,359.82
State, County and Municipal Bonds.....	228,059,533.25
Railroad Bonds.....	327,501,466.21
Public Utility Bonds.....	215,994,580.80
Industrial and other Bonds.....	26,818,027.51
Canadian Bonds.....	57,048,825.88
Foreign Bonds.....	317,330.50
Preferred and Guaranteed Stocks.....	84,036,258.00
Real Estate Owned ( <i>Including Home Office</i> ).....	126,631,821.63
Foreclosed Real Estate Subject to Redemption.....	3,521,041.35
First Mortgages on City Properties.....	404,236,105.38
First Mortgages on Farms.....	7,867,995.97
Policy Loans.....	361,232,688.26
Interest and Rents Due and Accrued.....	29,154,196.50
Net Amount of Uncollected and Deferred Premiums.....	30,338,272.23
Other Assets.....	115,616.16
<b>TOTAL.....</b>	<b>\$2,404,236,413.58</b>
	100%

### LIABILITIES and RESERVES

<b>Insurance and Annuity Reserve.....</b>	<b>\$1,957,638,266.00</b>
Present Value of Future Instalment Payments.....	97,225,326.62
Dividends Left with the Company at Interest.....	100,709,573.83
Other Policy Liabilities.....	16,054,897.36
Premiums, Interest and Rents Prepaid.....	11,284,946.96
Miscellaneous Liabilities.....	3,337,471.86
Reserve for Taxes .....	5,856,238.81
Reserve for Dividends payable to Policyholders.....	38,233,060.00
Special Investment Reserve.....	50,000,000.00
Surplus funds reserved for general contingencies .....	123,896,632.14
<b>TOTAL.....</b>	<b>\$2,404,236,413.58</b>

Bonds eligible for amortization are carried at their amortized values determined in accordance with the laws of the State of New York. All other bonds and all guaranteed and preferred stocks are carried at market values as furnished by the National Association of Insurance Commissioners. Securities amounting to \$36,145,051, included above, are deposited as required by law.

Over 199 million dollars was paid or credited in 1936 to policyholders and beneficiaries. This is a measure of the Company's service in a single year in providing human comfort and family protection. On December 31, 1936, the Company had 2,722,956 policies in force guaranteeing insurance protection of more than six and a half billion dollars, to be exact, \$6,660,968,484. The 451 million dollars of new insurance issued and the 46 million dollars paid to the Company by men and women for annuities in 1936 reflect continued public confidence and participation in the cooperative security offered by the New York Life. As we enter 1937, New York Life continues in its preeminently strong financial position.

*A more complete report listing the securities owned by the Company will gladly be sent upon request.*

**THOMAS A. BUCKNER, Chairman of the Board**  
51 MADISON AVENUE, NEW YORK, N. Y.

**ALFRED L. AIKEN, President**

**SAFETY IS ALWAYS THE FIRST CONSIDERATION . . . NOTHING ELSE IS SO IMPORTANT**



# PIONEERS

Four years ago . . . in the spring of 1933 . . . there began a new era in coal marketing.

On March 13, 1933, the Supreme Court of the United States granted a bill of rights to the producers who had formed Appalachian Coals, Inc. Thus the first regional coal marketing agency was born.

Headquarters of ACI were officially opened in the Transportation Building, Cincinnati, on April 17, 1933. Today, the same headquarters provide offices for the same company.

Since the date of its birth, such a short time ago, ACI has traveled far in putting into actuality the hopes and dreams of those who conceived it. The road has been rough, unmarked, uncharted, but ACI has blazed the trail. Prestige and experience are the heritages of ACI on its fourth birthday. Prestige for having fought honorably in the cause of stability; experience that helps ACI serve its producers, its agents, and its customers.

*Write for list of producers, including the pioneers of the marketing agency. Write for "Where to Buy ACI Quality Coals," listing the authorized agents of this company.*

**Appalachian Coals, Inc.**  
TRANSPORTATION BUILDING · CINCINNATI, OHIO

**THE GEORGIA MARBLE COMPANY**  
*Producers and Manufacturers of*  
**GEORGIA MARBLE**  
STATE, GEORGIA  
Atlanta · Chicago · Cleveland · Dallas · New York

**DRAWING MATERIALS**  
Drawing Instruments, Slide Rules, Planimeters, Drawing and Tracing Papers, Drafting Room Furniture, Surveying Instruments, Tapes.  
**PIGMENT Waterproof Drawing Ink**  
in black and white and a wide range of opaque colors. Catalogue sent on request. Inquiries solicited.  
**F. WEBER CO.** 227 PARK AVENUE  
BALTIMORE, MD.

## THE STAGE IS BEING SET

America is preparing for a notable industrial advance. Is your business prepared to take advantage of it?

*Correspondence invited*

### BALTIMORE COMMERCIAL BANK

Gwynn Crowther, President  
BALTIMORE, MARYLAND

Member Federal Reserve System—Member Federal Deposit Insurance Corporation

## Financial News

### Is Prosperity to Endure?

(Continued from page 60)

have determined upon tremendous programs in war equipment. Even granting the necessity, its use unfortunately, and that does not seem so far away, will bring woe and loss far exceeding the temporary burst of activity of which it may be the cause.

In other lines there is the stimulation of great demand for goods of many kinds. This is not evenly distributed, but it is hay-making time for those in a position to meet even a part of the needs of this greatest of all markets. The law of supply and demand, of course, will eventually assert its inexorable rule, but that time apparently is not yet.

### One Way to Good Will

**W**HAT part advertising should play in the present condition of affairs is not a matter about which there should be doubt. Putting aside any bias that may be attributed to the publisher in favor of the income side of his business, as a means for building up future good-will in a period of prosperity, it is generally recognized that proper publicity can be a power for good. Many firms today are increasing their advertising expenditures to double and treble previous allotments. People are in a receptive mood to read and listen to what the advertiser says if his product is worthy. The increase in advertising is another indication of reviving confidence.

### The Rise of Scrap

**T**RAVELERS on highways of the South see many trucks loaded with scrap iron and steel bound for seaports where their loads will be shipped abroad. The price of scrap is higher than it has been for a long time, and warehouses, yards, farms and dumping grounds are being searched for discarded material to meet the demand.

The business world has been accustomed to judge the rise or fall of prosperity by the rise or fall of the steel market—"as steel goes, business goes." This fundamental industry is enjoying a condition of pronounced prosperity.

### Expansion of Industry

**A**N encouraging thing about the present activity in business is the increasing amount of private capital going into new industry. There has been apparent of late more willingness to venture investments on future prospects than for a long time. In the Southern States where natural resources awaiting development are unequalled by any other section of the country, there is vast opportunity for the employment of new capital and signs are multiplying of increased development which will make what has been done heretofore seem small in comparison with what is to come.

The increase in this development will have as a contributing factor the work of engineers and scientists with their discoveries and inventions, which are making life better for all of us. This is seen in the rapid expansion by the chemical manufacturing industry. It would appear that the South is to take the lead in tremendous expansion in this field of enterprise.

The Blue Book of Southern Progress, shortly to be issued by this office, will give the facts about what the South has done and is doing. As a story of creative effort on the part of industry, it will be found of compelling interest to business readers.

# "Where Can We Get—"

Lower Taxes!  
Plenty of workers  
Freedom from  
labor troubles  
Ample housing  
facilities



Savings in  
power and fuel

Raw materials  
nearby

Quick access by  
water and rail to  
world's greatest  
markets

## Write for the Facts about Savannah and Port Wentworth

Industrial sites at Port Wentworth, on deep water a few miles north of the City of Savannah, possess almost every advantage that cuts manufacturing costs and builds business in rich, new markets.

Here you will find water, sewers, electric light and power already available; ample housing facilities and plenty of skilled and common labor of white American stock at less cost. A climate that saves in fuel expense. Exemption from taxes for new industries for five years.

In Georgia is fast-growing timber in unlimited acreage.—Minerals for almost every commercial use.—Those agricultural products like cotton, fibre, soy beans, tung trees, sweet potatoes, that chemists are now using to revolutionize industry.

Whether you are considering a complete new factory, a branch plant or a distributing warehouse, you should get the full facts about Savannah and Port Wentworth.

*Ask your engineers and accountants to outline the needs of your company and let us furnish you a comparison to your present figures that may spell the answer to your problems.*

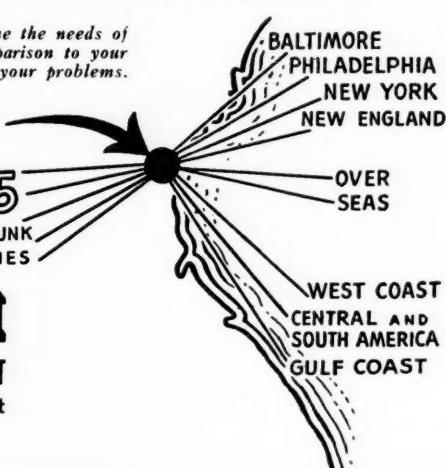
**PORT  
WENTWORTH**  
CORPORATION

Offices:  
Savannah, Ga.

Served by five trunk lines.  
The principal ocean outlet for  
the products of the Southeast.  
Fully equipped with modern  
docks, warehouses, etc., for  
handling coastwise and over-  
seas shipments.

17 East 42nd Street  
New York City

5  
TRUNK  
LINES



# INDUSTRIAL NEWS

## Chicago Power and Mechanical Engineering Exposition

A new power show for the mid-west—the Chicago Exposition of Power and Mechanical Engineering—is not intended to supplant the National Power Show at New York. The Thirteenth National Exposition of Power and Mechanical Engineering will be held at Grand Central Palace, New York, December 5-10, 1938, retaining the biennial interval now established while the Chicago exposition will be held in the new International Amphitheatre October 4-9, 1937. Both shows will be conducted by the International Exposition Company.

## Agents for Appalachian Coals

Fred Darragh, formerly with Hatfield-Campbell Creek Coal Company, is now representing Cabin Creek Consolidated Sales Company in eastern Michigan and northern Ohio. Cabin Creek Consolidated Sales Company is agent for Trux-A-Traer Coal Company, Cabin Creek Division, a constituent company of Appalachian Coals, Inc., Cincinnati, Ohio.

J. M. Daniel, sales manager of Stearns Coal Sales Company, announces Fred J. Ettinger now represents the company in Michigan. This organization is agent for Stearns Coal and Lumber Company, one of the producer stockholders of Appalachian Coals, Inc., marketing agent for high volatile bituminous coals mined in eastern Kentucky, eastern Tennessee, southwestern Virginia, and southern West Virginia.

## P & H Welder Shows Efficiency and Economy

The completion of an all-welded bird cage at Lincoln Park Zoo in Oklahoma City, 75 feet high, 50 feet wide, and 120 feet long, may mean a definite step toward a new and larger field for welding activities. It is one

of the first of its kind to be entirely welded in sections on the ground and then raised and welded into place makes it significant. Welding outfits used on the work included a P & H 150-ampere trailer welder and an old type acetylene welder. The P & H welder, which was made by Harnischfeger Corporation, Milwaukee, Wis., ran nearly 18 hours on a little more than 9 gallons of gasoline.

## Old Dominion Package Receives Award

The Old Dominion Box Company, Inc., Lynchburg, Va., produced the package which won the Bronze Award in the All-American Package Competition of 1936, sponsored by Modern Packaging. The award was based on a Bon Bon box featuring a half-dozen towels made by the Cannon Mills. Designed by Cannon and produced by Old Dominion, the package is declared to have made a record of having tripled sales. It was entered in the Set-Up Paper Box classification, in which there were 12,000 entries.

## G-E Exhibit at Southern Textile Exposition

A feature of General Electric Company's exhibit at the Twelfth Southern Textile Exposition at Greenville, S. C., April 5-10, is a new screenless, open textile motor with an improved ventilating system scientifically designed to permit operation in heavily laden atmosphere for long periods of time without attention. Other G-E products in the display will be loom motors and loom motor control, varnished-cambric and glyptal-sheathed cable, indicating and testing instruments, laboratory photo-electric devices and House of Magic displays. The mercury limit switch for spinning frame control, recently developed, will be demonstrated, and products of the Incandescent Lamp Department and General Electric Vapor Lamp Company will also be included in the exhibit.

## Boaz Invites Industries

Located on Sand Mountain in northern Alabama—a plateau over 100 miles in length and from 15 to 25 miles wide, between Chattanooga on the northeast and Birmingham on the south—the Town of Boaz—offers advantages for the location of industries in its dense rural population, location within the TVA zone, with Alabama Power Company service, high class native white labor, good market for clean staple cotton, choice fruits, etc. It also offers municipal tax and license exemptions for a period of years. Information may be obtained from G. W. Cox, Chairman of Public Affairs Committee, Boaz Civitan Club.

## Consolidates Sales Office With Plant

Grinnell Company, Inc., 1315 Marilla Street, Dallas, Tex., announces the consolidations of its sales office with plant, the latter being equipped with the latest improved pipe machines and stocked with materials for complete Grinnell automatic sprinkler installations. The main office of the company is at Providence, R. I.

## Stainless Steel at Textile Exposition

At the Southern Textile Exposition at Greenville, S. C., April 5-10, subsidiary companies of the United States Steel Corporation present a colorful, interesting and informative exhibit featuring USS Stainless Steel and its constantly widening application in the textile industry.

## Galusha Gas Equipment

The Wellman Engineering Company, Cleveland, Ohio, acquired the exclusive right and license under the United States patents to sell in the United States the Galusha Gas Generator, which is said to provide a gaseous fuel, uniformly clean and dependable. Albert L. Galusha, inventor of the Galusha Clean Gas Generator, has become associated with the Wellman organization as chief engineer of its recently acquired line of Galusha gas equipment. Bulletin No. 95—Illustrating and describing the Wellman-Galusha Gas Generator for producing clean gas for industrial purposes may be obtained from the company.

# FOR SERVICE TO THE SOUTH

**NATURAL GAS** service from this system is available for domestic, commercial, or industrial uses throughout a wide area in the

## STATE OF ALABAMA:

Alabama City	Cordova	Phoenix City	Selma
Anniston	Gadsden	Girard	Talladega
Attalla	Montgomery	Ragland	Tuscaloosa
Auburn	Opelika	Reform	Tuskegee
Birmingham	Pelham	Saginaw	Wetumpka

Available also in

## MISSISSIPPI & GEORGIA

## SOUTHERN NATURAL GAS COMPANY

Watts Building

Birmingham, Ala.



## CONTINENTAL *Chain Link FENCE*

### BESTWALL GYPSUM WALLBOARD

Now Comes With Nailing Marks!  
...Just Nail on the Dotted Line...

A revolutionary improvement! Now there is no need to measure or mark Bestwall for stud spacing. Bestwall is Nail-Marked . . . ready to nail—a saving of 10% or more in time.

**NAIL-MARKED—FIRE-PROOF—TWIN-MOUNTED**

**SOUTHERN MADE FOR SOUTHERN TRADE**

#### SALES OFFICES

Atlanta, Georgia  
1111 Rhodes Haverly Bldg. Certain-Teed Products Co.  
Baltimore, Maryland 1309 Lexington Bldg. 9th and Main Streets  
Richmond, Virginia

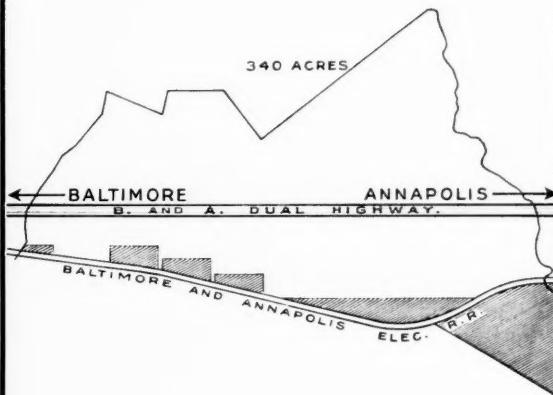
**CERTAIN-TEED PRODUCTS CORP.**

General Offices, New York, N. Y.

CERTAIN-TEED — SOUTHERN MADE  
FOR SOUTHERN TRADE

APRIL NINETEEN THIRTY-SEVEN

Here is the  
Industrial-Residential  
**LOCATION**  
you are looking for!



It probably possesses every factor on which favorable decisions are reached, for the location of a new or branch manufacturing plant, with the added feature—an ideal residential community for employees—on the new dual highway between Baltimore and Annapolis and near the nation's capital—WASHINGTON.

**IF THIS IS YOUR CHOICE—  
communicate with us at once**

**The Glenburnie Development Co.**  
1409 L Street, N. W., Washington, D. C.  
GEORGE B. FURMAN, President

## INDUSTRIAL NEWS

(Continued from page 64)

### Dresser Fittings Eliminate Pipe Threading

Recommended by the manufacturer for simplifying joint-making and repair work on both inside and outside piping for oil, gas, water, air, or other industrial lines, the standard line of Dresser Style 65 Fittings, recently announced by S. R. Dresser Manufacturing Company, of Bradford, Pa., employs essentially the same basic principle as that used in other styles of the well-known Dresser Coupling. The use of the new type, it is declared, obviates the necessity of "time out" for cutting pipe to exact lengths, threading, grooving, flaring, or screwing up joints in cramped quarters. After inserting the plain-end pipe into the fitting which comes completely assembled, it is only necessary to tighten two threaded octagonal follower nuts with a few quick turns of an ordinary wrench to complete a joint in a few moments.

### Pennsylvania Pump and Compressor Appointments

The appointment of the following district representatives has been announced by the Pennsylvania Pump and Compressor Company, Easton, Pa., manufacturers of air compressors, vacuum pumps, centrifugal pumps and air lift pumps: McVoy-Hausman Company, 2019 Sixth Avenue, North, Birmingham, Ala.; John A. Dodd, 101 Marietta Building, Atlanta, Ga.; Ryan Sales Corporation, 160 Second Avenue, North, Nashville, Tenn.

### "Caterpillar" Tractor Exhibit at Road Show

At the recent Southwest Farm and Road Shows at Wichita, Kans., the Caterpillar Tractor Company, of Peoria, Ill., sponsored three large exhibits and reports new highs in sales, attendance and general interest.

### B. & O. Promotes W. G. Carl—Report on Operations

Vice President Charles W. Galloway of the Baltimore and Ohio Railroad Company announces the appointment of W. G. Carl as assistant to vice president, succeeding the late F. E. Blaser. Mr. Carl entered the services of the B. & O. in 1903 and has been chief of the rates and pay bureau since January 1, 1919, heading Mr. Blaser's staff.

An operations report for the railroad shows operating revenues of \$13,477,471 for February, 1937, as compared with \$12,937,099 for

### By the Insurance Department CONDENSED STATEMENT SHOWING THE CONDITION OF THE Fidelity & Guaranty Fire Corp.

Baltimore, Md.

DECEMBER 31, 1936

Total income during the year	\$3,858,285.48
Total disbursements during the year	3,394,074.01
Total admitted assets	6,535,420.63
Total liabilities except capital	\$3,534,727.84
Capital actually paid	
up in cash	\$1,000,000.00
Surplus over all liabilities	2,000,692.79
Surplus as to policy holders	3,000,692.79
Total liabilities	6,535,420.63
Net Premiums in United States December 31, 1936	85,562,830.54
Risks written in Maryland during 1936	34,799,466.00
Premiums on Maryland business in 1936	138,487.98
Losses paid in Maryland in 1936	70,077.81
Losses incurred in Maryland in 1936	56,908.81

### STATE OF MARYLAND

Office of the

### STATE INSURANCE DEPARTMENT

Baltimore, Md., March 1, 1937

I hereby Certify, That the above is a true abstract, taken from the Annual Statement of the FIDELITY AND GUARANTEE FIRE CORPORATION, BALTIMORE, MD., for the year ending December 31, 1936, now on file in this Department.

W. S. HANNA,  
Insurance Commissioner.

the corresponding month in 1936, and net revenue from operations of \$3,288,649 for 1937, compared with \$3,149,974 for February, 1936. Net railway operating income amounted to \$1,799,373 for February, 1937, as against \$2,146,274 for February, 1936. For the two months of January and February, 1937, net railway operating income was \$3,820,422, compared with \$4,177,598 for January and February, 1936.

### Sodium Floodlighting Advantages

Recent tests of sodium vapor floodlighting made by Westinghouse Electric and Manufacturing Company on the front of its engineering building at Bloomfield, N. J., foretell a rapid increase in the use of sodium vapor lamps for floodlighting because of high efficiency and characteristic color.

### Wants Manufacturers Catalogs

The Builders' Exchange, of Richmond, Va., Charles P. Bigger, Secretary, is interested in securing catalogs and other trade literature issued by manufacturers.

### Birmingham Cement Plant Wins Award

For the fifth consecutive year the Birmingham plant of Alpha Portland Cement Company has been awarded the Portland Cement Association safety trophy for completing a full calendar year without a single disabling accident to employees.

### Twin Coach Deliveries

The Twin Coach Company, Kent, Ohio, delivered 100 coaches for the month ending March 15th, of which 17 are in the South as follows:

No.	Model	Passenger
Savannah Electric & Power Co., Savannah, Ga.	2	23-R 23
Northern Texas Traction Co., Fort Worth, Tex.	6	23-R 23
El Paso Electric Co., El Paso, Tex.	3	23-R 25
City of Coral Gables, Coral Gables, Fla.	2	30-R 31
Georgia Power Co., Atlanta, Ga.	4	23-R 23

### Purchasing Agents Convention

W. W. Gast, of the E. I. duPont de Nemours Co., Wilmington, Del., is chairman of arrangements for the National Convention of the National Association of Purchasing Agents, to be held in Pittsburgh, May 24-28. There will be 118 booths available for exhibitors, and an attendance of about 2,000 members of the National Association is expected. Frank H. Carter, of Dietrich Bros., Baltimore, Chairman of the Promotion Committee of the Baltimore Association, reports details will be available May 1, on the second annual Manufacturers' Products Exhibit to be held for three days at the Lord Baltimore Hotel in October.

# There are— Opportunities in FLORIDA for investment—

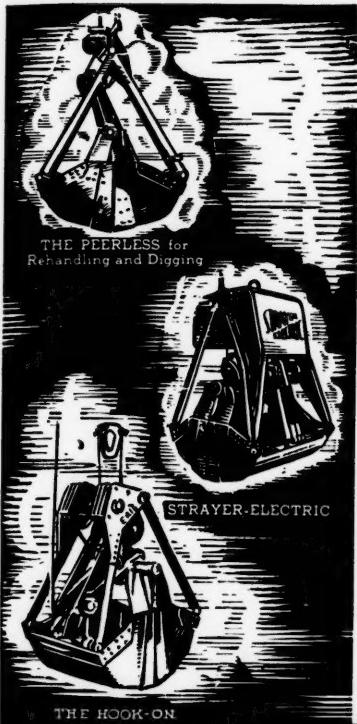
To learn of the many and varied opportunities for investment one should visit Florida and make a personal survey of the different sections of the State—

For undeveloped farm and grove lands, industrial sites and beach property on the East Coast of Florida—consult—

### Model Land Company

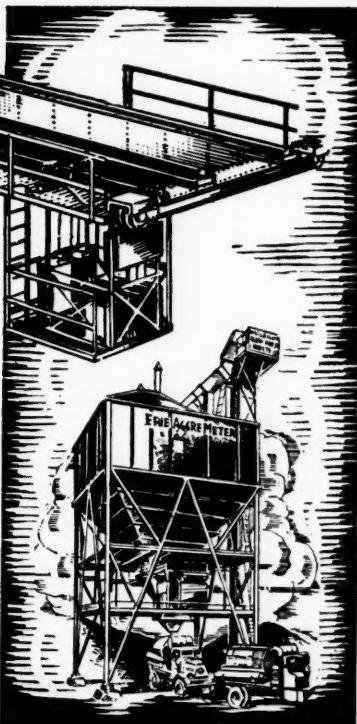
Flagler System

St. Augustine—Florida



## AGGREMETERS BUCKETS CRANES

Just a reminder folks • If your problem is storing, measuring and dispensing to truck or truck mixer bulk materials or concrete—the answer is an Erie AggreMeter • If your job is moving earth by bucket—Erie builds the complete line from  $\frac{1}{4}$  yd. up in all types • If you plan for a shop or yard Overhead Traveling Crane—Erie builds a quality crane to meet your requirements. The point is—when can we help you reduce handling costs? Bring on your problems. Address Dept. A for speed.



**ERIE STEEL CONSTRUCTION CO., ERIE, PENNA.**

Strayer Electric Buckets, Overhead Electric Cranes, AggreMeters,  
Clamshell, and Dragline Buckets



## STEEL THRESHERS

Are the last word in rapid handling, thorough separation and cleaning of grain—your insurance of better profits and satisfied customers.

Built to withstand hard service, with welded steel frame, simple construction and easy accessibility, Frick Threshers have a reputation for very low operating cost. Roller and ball bearings mean light running.

For better Threshers, Tractors, and Saw Mills, there's nothing like a Frick.



WAYNESBORO.  
**FRICK Co.** PA.

## Bethlehem Adds to Plant Facilities in Maryland

(Continued from page 37)

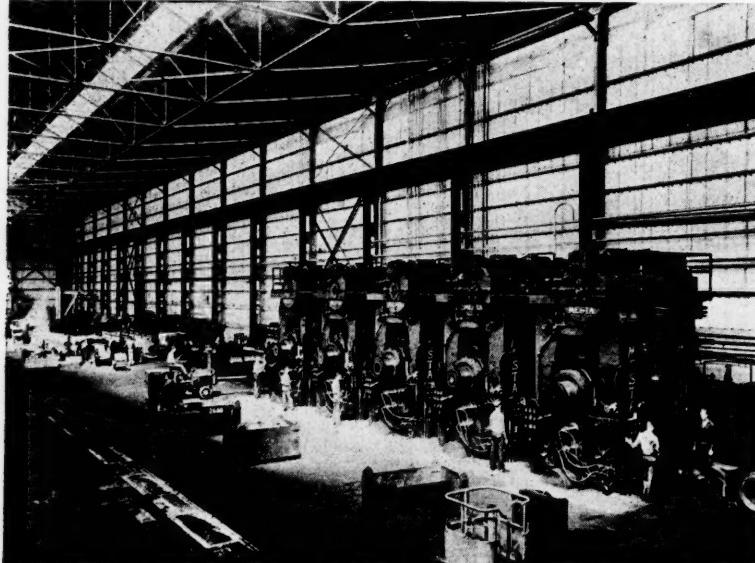
storage building, which is part of the new construction.

The four-strand high-speed continuous rod and bar mill is being built adjacent to the present rod mill, and will be tied in as a unit in the existing rod and wire building facilities. This high-speed mill, with its stands of rolls, runout, cooling-bed, shears, etc., will extend for one-third of a mile, and will have a capacity rated at over 20,000 tons per month, almost double that of the existing mill. Facilities for drawing rods into wire and also for manufacturing wire into finished products, such as nails, barbed wire and bale ties are among the auxiliary units being enlarged.

One important Bethlehem product, distinctly new as a Maryland plant item, will be concrete reinforcing bars. The new rod and bar mill will be utilized in the production of this item, as well as to provide an increased tonnage of rods to serve the enlarged wire drawing and finishing facilities at the Baltimore plant. Some of its output will also go to other manufacturers of such products as wire, bolts, nuts, and screws.

Auxiliary facilities for warehousing and fabricating reinforcing bars will enable Bethlehem to make direct shipments of this product by truck to the Baltimore and Washington area, and will also provide a nearer source of supply for estab-

Tandem Roll Train of the Cold-Reducing Tin Plate Mill at the Bethlehem Steel Company's Maryland Plant



lished distributing centers in New York and Philadelphia.

In general, the new units for producing both flat-rolled products and products made from rods or bars will place Bethlehem in a better position to serve its Eastern and Southern markets, and the added capacity will be of especial advantage in expediting water shipments to the Atlantic seaboard and the Gulf and Pacific Coast States.

With these additions the Maryland Plant, the only large steel plant in the United States on tide-water, strengthens its position as one of the world's largest and most modern integrated units for making steel and finished and semi-finished steel products. It was at this plant that Bethlehem developed its bethanizing process in which 99.99 per cent pure zinc is deposited in wire electrolytically. Among the list of principal products manufactured here are pig iron, rails, sheared and universal plates and skelp, flanged and dished plate products, sheet bar and billets, tin and black plate, plain and galvanized sheets, wire rods, wire and wire products, butt-and-lap-welded steel pipe, brass and iron castings.

## South's Steel Industry

(Continued from page 36)

This company is also building at Houston. Its new plant there is costing \$1,500,000.

### 4,175,000 Tons of Pig Iron Produced in South Last Year

With the operating rate running ahead of 1936, the latest figures issued by the American Iron and Steel Institute covering the year 1936 show a production of

31,029,187 tons of pig iron and ferro-alloys compared with 21,372,699 tons in 1935. Approximately 4,175,000 tons were produced in the Southern States, or a gain of 32 per cent as compared with 3,142,000 tons in 1935. Alabama is the largest iron producing state in the South with 1,998,212 tons in 1936 compared with 1,297,960 tons in 1935. In basic pig iron, the South produced 2,705,820 tons in 1936; in foundry pig iron 941,878 tons, and in Bessemer and low phosphorus pig iron 568,000 tons.

### Production Pig Iron by Grades and Ferro Alloys by Kinds in the United States

#### Basic Pig Iron

First 6 months 1936	Second 6 months 1936	Total 1936
Tons	Tons	Tons
9,067,601	11,409,320	20,476,921
<b>Bessemer and Low-Phosphorus Pig Iron</b>		
2,448,248	3,428,514	5,876,762

#### Foundry Pig Iron

966,369	1,064,622	2,030,991
<b>Malleable Pig Iron</b>		
829,025	888,032	1,717,057

#### Ferro-Alloys by Kinds

384,347	428,293	812,640
---------	---------	---------

Not included above are 33,671 tons of forge or mill pig iron and 81,145 tons of white and mottled, direct castings, etc., making the total output 31,029,187 tons for 1936.

## Obsolete Equipment

(Continued from page 46)

shown a net profit even if all of the actual depreciation had been charged against it during its useful life.

"If manufacturers adopted a policy of replacing equipment each year to the extent of the actual depreciation which occurred during the year, they would have the advantage of using equipment that was up to date at all times, and there would be no necessity for large special appropriations for making replacements, which are often difficult to finance. Such a policy could not be completely adopted by all users of equipment, but it is a definitely established fact that a number of manufacturers have found from actual experience that a more or less constant rate of equipment replacement is very profitable."

Reports show that the rate and degree of obsolescence varies greatly in different industries. Probably the most up-to-date of all industries today is that of automobile manufacturing. An important lagging industry which has begun to take modernization seriously is that of railroad equipment maintenance. In June, 1935, it was estimated that the facilities used for the maintenance of equipment represent an investment of \$1,000,000,000 of which \$320,000,000 is in shop machinery, a large part of which is admittedly obsolete both from the standpoint of age and of productive capacity. To what extent obsolescence was increasing can be seen in the fact that less than four per cent of all the money spent for additions and betterments on Class 1 roads over a period of 17.5 years prior to 1932 was spent for improving the facilities which the industry uses to maintain equipment.

# GLAMORGAN PIPE & FOUNDRY CO.

LYNCHBURG, VA.

*Manufacturers of*  
**Cast Iron Pipe and Fittings**  
**For Water and Gas Service**

## CRUSHED LIMESTONE Best for All Purposes

We manufacture all sizes of stone suitable for all classes of road building and concrete work where only a high-grade limestone is required.

Quarries opened up in 1912.  
Capacity 8000 tons daily.

### Four Quarries

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.  
Boxley, Greenville County, Va.

**W. W. BOXLEY & COMPANY**

Room 711, Boxley Building, ROANOKE, VA.



**WILLIAMS** Power-Arm,  
BUCKETS Multiple-Rope  
and Dragline

*Write for Bulletins*

The WELLMAN ENGINEERING CO.  
7003 CENTRAL AVE., CLEVELAND - OHIO

### SAND—GRAVEL—BRICK FILTER GRAVEL

Washed Sand and Gravel for Concrete  
Roads and Buildings  
Filter Gravel, all sizes—Building Bricks

FRIEND & CO., INC. River St., Petersburg, Va.

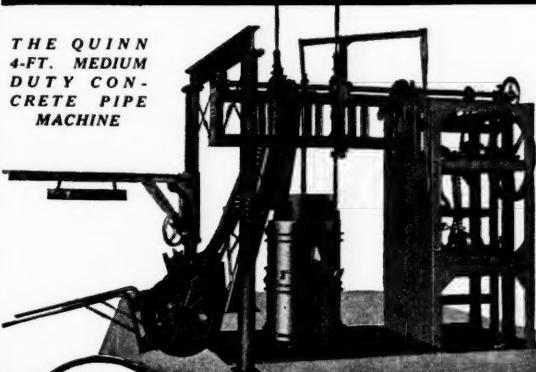
## MASCOT CHATTS

ASPHALTIC ROADWAY GRAVEL  
ROOFING GRAVEL CRUSHED STONE  
ASPHALT FILLER DUST



American Limestone Co., Knoxville, Tenn.

THE QUINN  
4-FT. MEDIUM  
DUTY CON-  
CRETE PIPE  
MACHINE



# QUINN QUALITY CONCRETE PIPE

### The Pipe That Will Always Make Good!

"Quinn Process" concrete pipe surpasses most specifications because of its 60% greater compression test and lowest absorption. "Quinn Process" produces strong, sturdy, long lasting, smooth finished pipe.

Make better pipe in all sizes, at lower cost, with Quinn Concrete Pipe Equipment. Write for information and prices on Quinn equipment for producing all types of concrete pipe quicker, better and more economically.

## QUINN 4 ft. Medium Duty PIPE MACHINE

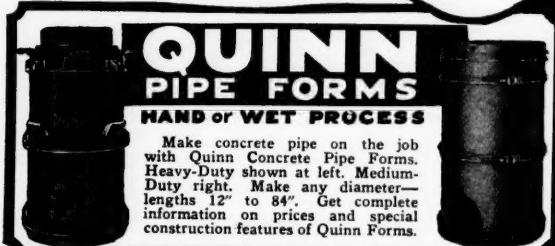
The Quinn 4-foot Medium Duty Concrete Pipe Machine, shown above, makes pipe 12" to 60" in diameter in 30", 36" and 48" lengths. Machine tamping, 400-pound trip-hammer action blows at rate of 370 per minute packs concrete in dense mass—produces smooth finish pipe of super-strength and lowest absorption.

Our 6-foot Machine makes pipe 12" to 60" in diameter in 36", 48" and 72" lengths. This machine has capacity up to 100 tons a day. Write for details, capacities, costs, etc.

**Quinn Wire & Iron Works**  
1605 Twelfth St., Boone, Iowa

## QUINN STANDARD

Quinn Concrete Pipe construction is recognized as standard by many municipalities, drainage, sewerage and irrigation districts. In asking for bids on pipe, "Quinn Standard" or equivalent means Quinn pipe has no superior.



## QUINN PIPE FORMS

HAND or WET PROCESS

Make concrete pipe on the job with Quinn Concrete Pipe Forms. Heavy-Duty shown at left. Medium-Duty right. Make any diameter—lengths 12" to 84". Get complete information on prices and special construction features of Quinn Forms.

## Margarine

(Continued from page 42)

cottonseed oil that has taken place in the margarine industry during recent years.

The 1936 total of 108,106,111 pounds represents a gain of 8,601,367 pounds over the 99,504,744 pounds of cottonseed oil used in margarine production during 1935 and is approximately double the 1934 volume of 54,778,000 pounds. In comparison with the consumption for previous years, the 1936 figures represent amounts roughly three to six times as great, as is indicated by the following table, from Bureau of Internal Revenue reports:

### COTTONSEED OIL USED IN MARGARINE

Year	Pounds
1920	18,532,000
1921	15,420,000
1922	18,757,000
1923	20,640,000
1924	20,966,000
1925	25,608,000
1926	23,372,000
1927	24,801,000
1928	28,173,000
1929	30,214,000
1930	27,445,000
1931	16,027,000
1932	15,096,000
1933	17,997,000
1934	54,778,000
1935	39,505,000
1936	108,106,000

### Other Farmers Benefit

The reason for the increasing interest of the cotton industry in margarine is readily apparent. In addition to affording a market for an increasing volume of cottonseed oil, margarine gives the cotton

producer and processor that other essential for stabilized sales and prices—diversified outlets. In recognition of these facts, the National Cottonseed Products Association has expanded its Educational Service program to place greater emphasis upon markets for cottonseed oil, developing its program upon the same fundamentals which have been successfully used for feed products.

While primarily interested in cottonseed oil, the National Cottonseed Products Association recognizes as basic and essential these facts:

1. Every American fat and oil producer has an equal right with the cotton producer, or processor, to sell his products in the American market.

2. There is room enough for all American fats and oils in the American market, provided that all are permitted to have this equal right.

As an important step in putting these principles into actual practice in the United States, the National Cottonseed Products Association is joining other American fats and oils producers, processors and manufacturers in actively supporting a bill, H. R. 3905, introduced in Congress by Congressman Richard M. Kleberg of Texas.

### Kleberg Bill Will Help

In brief, this Bill provides that retail grocers handling only margarine made 100 per cent of domestic ingredients will be exempt from the present Federal margarine license tax of \$6 annually, now imposed on all retail grocers. It further provides that margarine made entirely of

### Cottonseed Oil Industry

471 Mills in the United States, Practically All in the South, Crushed Cottonseed During the 1935-36 Season and in Addition 90 Mills With Necessary Equipment Did Not Crush Any Cottonseed Last Season.

	1936 (Season ending Aug. 1)	1937 (Aug. 1 to March 1)
<b>Cottonseed crushed</b>		
(tons) ...	3,817,751	3,780,419
<b>Oil produced</b>	(pounds) 1,163,736,415	1,132,769,388
<b>Cake and meal</b>		
(tons) ...	1,738,883	1,692,566
<b>Hulls</b>	(tons) ...	987,849 963,519
<b>Linters</b>	(bales) ...	867,215 927,523

domestic ingredients shall be plainly labeled as such.

The Kleberg Bill is of especial importance to consumers, food stores, and American fats and oils producers. Space does not permit further discussion of H. R. 3905 here, but the writer will welcome comments and questions upon it.

### Soybean and Peanut Market

Beef cattlemen, peanut growers, soybean growers and milk producers are among the agricultural groups who have widely benefited from the market for their products that is afforded by margarine.

Because of the emphasis that has been placed on the soybean as the "Magic Bean" with wide industrial potentialities, the phenomenal increase that has taken place in the use of soybean oil for margarine production is of special interest.

In 1930, the volume of soybean oil used by the margarine industry stood at 2,257,000 pounds, the highest total at any time since 1916. By 1932, however, this had declined to the negligible amount of 3,000 pounds. Rising steadily thereafter, consumption rose to 1,740,000 pounds in 1935, and then showed the huge increase to a total of 14,261,913 pounds in 1936.

Use of all American fats and oils in margarine has increased during recent years, the total of domestic oils used standing at 153,755,799 pounds in 1936 compared with 135,285,000 in 1935 and 43,921,000 pounds, the low reached in 1933.

### Opportunity for South

To the South, this expanding industry offers a major opportunity from both an agricultural and industrial standpoint. The South and Middle West are the logical locations for margarine plants which need the beef fats, cottonseed oil, soybean oil, peanut oil, milk and salt produced in such abundance by these regions.

### Hardwood Producers' Officers

The Southern Hardwood Producers' Association at its annual convention at the Roosevelt Hotel, New Orleans, elected Fred W. Schadt, Helena, Ark., as president for the ensuing year. Other officers named are K. L. Emmons, Memphis, Tenn., vice-president; J. W. Welsh, treasurer, and Ed R. Linn, Secretary.



**Electric**

**THE HALSEY W. TAYLOR CO., Warren, O.**  
(Manufacturers of Drinking Fountains)

**HALSEY TAYLOR**  
**COOLER FOUNTAINS**

*These Coolers keep workers satisfied*

**AN abundant supply of cool drinking water ALWAYS—and workers return dividends through increased production. The many distinctive features of Halsey Taylor Cooler Fountains guarantee maximum cooling capacity at minimum cost. Only Halsey Taylor Coolers have two-stream projector and automatic stream control . . . hence, the most sanitary cooler you can use!**

Complete catalog of coolers and fountains on request.

No. 2800 Ice Cooler



# The Arundel Corporation

## BALTIMORE, MD.

**Constructors and Engineers  
Distributors of Sand-Gravel-Commercial Slag**

### A COMPLETE ORGANIZATION

Our complete organization with years of experience in successfully executing large construction contracts of various kinds is prepared to undertake the construction of earth, masonry and concrete dams, drydocks, dredging of all kinds, river and harbor improvements, deepening channels, hydraulic filling and rock work, tunnels, railroad construction, sewers and waterways.

#### PERSONNEL :

JOSEPH V. HOGAN, President  
W. BLADEN LOWNDES, Vice-President  
JOHN T. DAILY, Secretary  
RICHARD A. FROEHLINGER, Treasurer

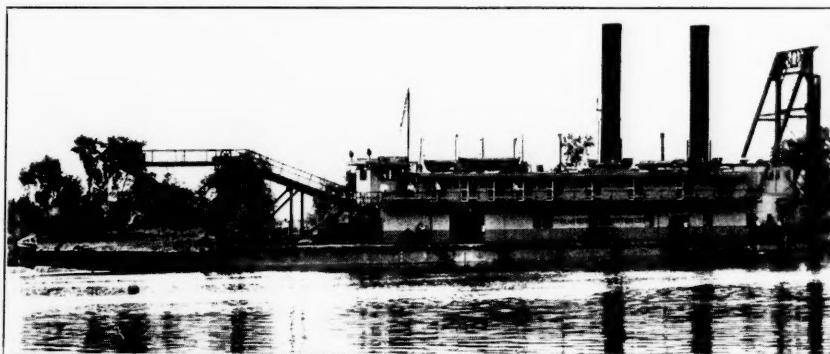
E. L. WADE, Assistant Secretary  
J. N. SEIFERT, Assistant Treasurer  
C. W. BLACK, Chief Engineer  
HOWARD O. FIROR, General Supt.

**MAIN OFFICE: Arundel Building, Pier 2, Pratt Street  
BALTIMORE, MD.**

*Branches: NEW YORK CITY—MIAMI, FLA.—RICHMOND, VA.*

## DREDGING

**FILLING, LAND RECLAMATION, CANALS, PORT WORKS  
RIVER AND HARBOR IMPROVEMENTS—DEEP WATERWAYS AND SHIP CHANNELS**



We are especially equipped to execute all kinds of dredging,  
reclamation and port works in Southern waters.

Correspondence invited from corporate and private interests everywhere.

*Contractors to the Federal Government*

**ATLANTIC GULF AND PACIFIC CO.**  
NEW YORK: 15 Park Row      HOUSTON, TEXAS: Scanlan Building

# INDUSTRIAL EXPANSION IN EAST MISSISSIPPI

**I**NDUSTRIAL expansion predicted for Meridian and east Mississippi during 1937 is already taking place, a survey taken during recent weeks shows.

The Phillips-Jones Shirt Corporation, which began operations in Meridian some two years ago, has completed an addition to the first factory building, increasing its personnel from some 750 to 1,000 persons.

The Meridian Union Stockyards, first livestock cash facility in east Mississippi, announces expansion plans.

A \$200,000 hosiery plant building is under construction. It will be air-conditioned and directors of the company plan to employ some 400 persons.

Private industry and State and Federal agencies have planted some ten million trees in the area in a reforestation program.

A new canning plant is scheduled for opening during the later Spring months.

A \$150,000 cold storage plant is to be constructed in the early future, exact date of construction not known at this time.

The Clark Athletic Repair Company, re-makers of athletic equipment, has moved to Meridian from Starkville, Mississippi.

Colonel Al Key, famed endurance pilot,

has begun the construction of a commercial long-range plane in Meridian and is planning to complete organization of a new plane factory. Meridian is completing Key Field, the largest airport in Mississippi.

## More Industries for the South

(Continued from page 41)

ment of more than \$10,000,000.

During the five years 1932-1936, inclusive, the Illinois Central System recorded the establishment of 678 new industries on line. These industries have an estimated capital investment of \$35,600,000 and afford employment to approximately 20,850 workers. The 1936 showing is therefore a marked improvement over the 5-year annual averages of 136 new industries, 4,170 new employees and \$7,118,000 in new capital.

The 1936 distribution of communities benefited was as follows: Arkansas, 1; Illinois, 28; Indiana, 3; Iowa, 12; Kentucky, 7; Louisiana, 11; Mississippi, 32;

South Dakota, 1; Tennessee, 4. From this it will be seen that the management of these 145 new industries selected 55 Southern cities and towns, as compared with only 44 Northern communities that were favored. The 86 industries that were established in Southern communities during 1936 give regular employment to 3,450 persons and represent an estimated capital investment of \$7,200,000.

## Truck Transportation Gains in the South

(Continued from page 43)

of intensive study by such governmental groups as the United States Bureau of Public Roads, the American Association of State Highway Officials, the motor vehicle administrators along with industrial organizations and safety councils.

The objective is a sound set of principles designed to require the truck user to pay a tax in proportion to his use of the highway. The truck owner, whether a shipper or for-hire operator, is willing to pay his fair share, but objects to the present practice of paying taxes, through registration fees or gasoline levies, that are used for other than highway purposes.

He is willing to subscribe to a uniform set of traffic and size and weight regulations that go as far as necessary in protecting the public and highway structures.

He recognizes in anything beyond that a penalty tax or regulation that places an artificial burden of cost on his business.



## DEPENDABILITY

LYONORE Metal gives you double assurance—1. proved superiority under all conditions—2. the integrity and long years of experience of Lyon, Conklin & Company, Inc., behind every purchase. To be sure of maximum life and lasting economy in all sheet metal work, look for the Lyonore Metal trade mark. Write for complete information.

**Lyon, Conklin & Co. Inc.**  
BALTIMORE MARYLAND

**Lyonore Metal**  
CHROMIUM • NICKEL • COPPER • IRON ALLOY



YOUR entire property, enclosed with Pittsburgh Fence, becomes a well-protected, well-controlled unit where pilfering and outside interference are reduced to minimum. The cost of a Pittsburgh

PITTSBURGH STEEL CO., 783 Union Trust Bldg., Pittsburgh, Pa.



**Pittsburgh Fence**

MANUFACTURERS RECORD FOR

They  
are  
mate  
indu  
prod  
Also  
quie  
Our  
your  
  
PE

WOULD YOU SPEND

ONE DOLLAR  
TO SAVE FIVE?



Your plant and your property are your biggest assets—that is why you buy insurance to protect them from future losses.

But here is a form of insurance that PREVENTS—that stops the possibility of trouble in the future. It's Termite Insurance.

Termites are tiny, prolific insects that secretly feed on wood and other cellulose materials. Annually they do millions of dollars' worth of damage to property by hollowing out supporting timbers—by literally eating away the strength of build-

ings. Even if your buildings are termite infested, you probably do not know it unless serious damage has already been done.

Hundreds of nationally known firms—Armour, Crane, Standard Oil, General Foods, Goodyear, Continental Can are a few—have "spent one dollar to save five" by using Terminix, world's largest organization specializing in termite control. Terminix is a division of E. L. Bruce Co., largest maker of hardwood floorings. 30,000 structures have been protected by Terminix treatments, guaranteed and insured.

Terminix will inspect your property free—without cost or obligation. If you have termites, Terminix will show you how to insure against future damage.

Return this coupon today and be sure. Remember—termites have no respect for any structural materials which bar their way to food. If there's wood (or other cellulosic materials such as paper, cloth, leather) in your plant, there may be termites.

TERMINIX DIVISION, E. L. BRUCE CO., MEMPHIS, TENN.



Yes—we want you to give our property a free inspection for termites. We understand there is no cost or obligation.

Terminix Division, Dept. MR-4  
E. L. BRUCE CO.,  
Memphis, Tenn.

Name.....

Address.....

City..... State.....

NOW ROLL ROOFING  
with 7-layer seams  
SEALS NAILS—STOPS LAP LEAKS



84,000 square feet Genuine RU-BER-OID Roll Roofing, applied with Eason Flaps on the F. S. Royster Guano Co. Building, Macon, Ga.

Genuine RU-BER-OID Roll Roofing is now available with Eason Flaps.\* With this improved method of application, all nails are sealed with two layers of fabric and one of asphalt seam cement. Nails cannot rust or pop out because of heat. Virtually a 7-layer, built-up seam with closed lap edge, there is no opportunity for wind or water to get under it.

Genuine RU-BER-OID is supplied with Eason Flaps only upon request. The extra cost, considering the extra protection, is trifling. It will pay you to investigate. Address Dept. M.R. 4-37  
\*Patented

**RU-BER-OID**  
ROOFING AND BUILDING PRODUCTS

THE RUBEROID CO., Executive Offices: 500 Fifth Avenue, New York, N.Y.

U. S. PIPE & FOUNDRY CO.  
CHATTANOOGA, TENN.  
C. W. G. in Side-Wall Windows

SPECIFY  
CORRUGATED WIRE GLASS  
FOR SKYLIGHTING

They diffuse light with a minimum of shadows. They are self cleaning and can be used on a roof of any material, and supply daylight in manufacturing and industrial plants—an important factor in all modern production.

Also used with excellent results on sidewalls, marquises, canopies and wherever daylight is needed.

Our Engineering Service Department can aid you on your skylighting problems. Write or wire.

**PENNSYLVANIA WIRE GLASS CO.**  
1612 MARKET STREET  
PHILADELPHIA, PENNSYLVANIA

# GAINESVILLE, GA., BUILDING BIGGER AND BETTER CITY

**\$3,000,000 Improvements During Past Year and Rehabilitation Rapidly Carried Forward**

A NEWER and more prosperous city is rising from the ruins left by the tornado which demolished Gainesville, Ga., on the morning of April 6, 1936. Private and public interests have wholeheartedly joined in minimizing the \$15,000,000 property loss, and are helping to rebuild a bigger and better city.

During the year which has passed since the disaster over \$3,000,000 has been spent in rehabilitation and improvements. Every possible aid has been given to those who lost everything in the storm. The Gainesville Replacement Homes, Inc., announces the completion of 125 model homes, of which 50 are for white families, and 75 for colored. These homes were built with the cooperation of the RFC and will be sold to occupants over a period of years during which the ren-

tals will be applied to the purchase price.

Work has been started on a new Civic Center to occupy two city blocks in the heart of the city, and will contain the new City Hall and Courthouse. These buildings will be constructed of stronger and better materials than have ever been used in the past to guard against the possibility of another catastrophe. In doing this, Gainesville will follow the example of other cities which have had to rebuild after fire and earthquake.

Many new business houses have been erected, and thousands of dollars have been spent in private repairs and reconstruction. A modernly equipped theatre has also been completed.

With the aid of a \$231,130 loan from the RFC, Brenau College, which was severely damaged, has almost completed repairs. The front of the main building, Yonah Hall, has been given a new Colonial facade, and the dormitories have been renovated. New floors, closets, and tile baths have been included.

In the city proper the work of rehabilitation is being rapidly carried forward.

City Commissioners recently voted unanimously to widen Broad Street lead-

ing to the Atlanta highway, for at least three blocks if not the entire length.

Broad Street, according to the Board's plans, will become the main thoroughfare for through traffic when completed, and will relieve the present main artery, the Square. Gainesville considers this improvement one of the most important to be made since the storm of last April.

The street is expected to be 80 feet wide in the Civic Center of town and approximately 50 feet in width the rest of the distance. Only five property owners will be affected by the change in the downtown area.

New buildings now line the Square on all four sides.

The Dixie Hunt Hotel, property of Brenau College, is under construction and when completed will be one of the most modern hotels in the South.

These projects have given employment to hundreds of people who otherwise would have been in very unfortunate circumstances following the loss of all their possessions. A rather interesting observation is that the population of the city has shown a decided increase since the tornado. In part, this may be attributed to government workmen who have been sent here to help in the reconstruction. Gainesville is gradually but surely emerging from the desolation and chaos under which it was crushed a year ago.

## NORFOLK TANK CORPORATION

NORFOLK, VA.

Baltimore Rep: Allan U. Bevier, Inc., 322 S. Fremont Ave.

### STEEL PLATE FABRICATORS

TANKS:	Pressure Truck Trailer	Water Process Storage	Standpipes Bin Hoppers Stacks Pipe Coils	Angle Rings Dredge Pipe Asphalt Equipment Industrial Specialties
--------	------------------------------	-----------------------------	---	---

## STEEL PLATE CONSTRUCTION TANKS STACKS DREDGE PIPE

Acid Tanks	Digestors	Jacketed Tanks	Settling Tanks
Breechings	Divers	Molasses Tanks	Standpipes
Condensers	Filters	Oil Storage Tanks	Stills
Coolers	Gasoline Tanks	Pressure Tanks	Vacuum Tanks

### LANCASTER IRON WORKS

LANCASTER, PA.

## BRISTOL STEEL & IRON WORKS, INC.

### STRUCTURAL STEEL

For Bridges, Buildings and All Industrial Purposes

Steel Plate and Miscellaneous Iron Work

Complete Stock Shapes, Plates, Sheets and Bars for Immediate Shipment

BRISTOL, VIRGINIA-TENNESSEE

"SAVE WITH STEEL"

## FILTERS

Water Filters for Municipalities, Textile Finishing Establishments, Rayon Manufacturing Plants, Swimming Pools, Raw Water Ice Plants, Laundries, etc.

### ROBERTS FILTER MANUFACTURING COMPANY

604 Columbia Avenue

Darby, Pennsylvania

## NEW YORK CENTRAL IRON WORKS

1001 Mitchell Ave., HAGERSTOWN, MARYLAND

### Steel Plate Fabricators

### TANKS, PRESSURE VESSELS, STACKS, BREECHINGS, ETC.

Phila. Offce: 1836 Chestnut Ave., Phone. Hancock 5796  
New York Offce: 92 Liberty St., Phone. Cortlandt 7-1234

## Water Purification Plants

Any Type—Any Purpose—Any Capacity

Dry Chemical Feed Machines  
Swimming Pool Filters

### E. W. BACHARACH & CO.

Rialto Bldg. Kansas City, Mo.

## STRUCTURAL STEEL for BUILDINGS and BRIDGES

Capacity 1000 Tons per Month. 3000 Tons in Stock

Carolina Steel and Iron Company

The Largest Steel Fabricators in the Carolinas

Greensboro

North Carolina

S. C. Rep., Edward McCrady, 307 Allen Bldg., Greenville, S. C.

## Filtration and Pumping Equipment

For Water Works and Swimming Pools

Sales and Installation

### BURFORD, HALL AND SMITH

140 Edgewood Avenue, N. E.

Atlanta, Georgia

**Tank Builders For Over 80 Years!**

# "WILL HOLD WATER-- A Universal TEST"



**That's what they're made for!**

All our tanks are given the cold water, soapsuds and air pressure tests to insure against leakage. Let us figure on your tank needs. Tell us your problems or requirements—Send your specifications or write for "Tank Talk"—No. 12-D.

**R. D COLE MFG. CO.**

## COLE TANKS & TOWERS

• NEWNAN, GEORGIA •



*Flanging is simple  
with Armco High Tensile*

# DAVIS CYPRESS TANKS

**FACTORY TANKS AND STEEL TOWERS**

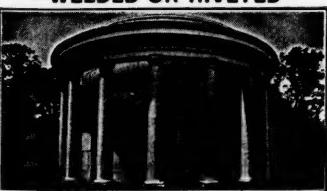


If you handle liquids, for storage or processing, Davis Cypress Tanks very likely will provide new economies. For water, common chemicals, or for mixing and storing solids and compounds. Industrial plants and railroads have used our tanks for 46 years. Ask for estimates and catalog — both sent promptly on inquiry.

**G. M. DAVIS & SON**  
P. O. Box 5, Palatka, Florida

# SOUTHLAND PRODUCTS

**WELDED OR RIVETED**



We now manufacture and offer to the trade tanks in all sizes for pressure or gravity work. Also other steel equipment of either

**WELDED  
OR RIVETED  
CONSTRUCTION**

This applies to field as well as shop built equipment.

*Write us for information and quotations.*

Million gal. Tank at White Sulphur Springs, W. Va.  
**CHATTANOOGA BOILER & TANK CO.**  
CHATTANOOGA, TENN.

APRIL NINETEEN THIRTY-SEVEN



**ARMCO**  
**High Tensile Steel**

## Going After Industries

THE Legislature of North Carolina recently authorized an appropriation of \$250,000 to advertise the State, with particular attention to be given to industrial development. Other Southern States, and many Southern communities, have been appropriating money largely to advertise attractions to visitors and tourists. That greater recognition is now being given to advertising industrial resources and manufacturing advantages is a constructive step which should have been taken long ago. First the railroads and then the power utilities have been carrying on this movement and some farsighted business men have been giving able support but they could not carry the whole burden of state-wide campaigns to stimulate employment-creating plants.

Alabama, Mississippi, Louisiana and Texas are among the group of Southern States which have been active in furthering industrial expansion in recent months. That the trend toward decentralization and establishment of plants in the South is gaining momentum is shown by the record investment in new industrial enterprises in the South during 1936. While kraft pulp and paper, and steel products making dominated the larger investments, the diversification of industry was pronounced with plants of the smaller type from canning to highly specialized manufacturing, included in the total of more than \$322,000,000 in industrial construction awards last year. The activity has continued during the first quarter of 1937.

As the South spends approximately \$1,-

000,000,000 a year for food and manufactured goods produced in other states and in foreign countries, opportunities are open in the South for the production of many of these products which could be made in local plants. It has abundant raw materials for supplying industries to manufacture paper, starch and other commodities which the United States imports in large quantities. Progress is being made in building a greater industrial foundation and the awakening interest of many public officials to the need for advertising the industrial advantages of the South will lead to a more rapid economic growth.

## \$200,000 Prize Contest on Arc Welding Practices

THE James F. Lincoln Arc Welding Foundation, created in honor of the president of The Lincoln Electric Company, Cleveland, O., will offer prizes totalling \$200,000 to writers of winning papers on the use of arc welding. Individual cash awards range from \$13,700 down to \$800.

The contest is dedicated to the scientific development of the industry. Papers may be written on subjects listed in 44 main industrial classifications, or other subjects which describe the use of arc welding.

To be eligible, the contestant must actually have participated in the work upon which the subject matter of his paper is based. Persons other than employees or consultants may submit papers on the de-

sign of any machine, structure, building, manufactured, or fabricated product. Contestants must state clearly their exact relation to the work, and to the producing or developing organization.

Papers may be of three general types; they may be on the redesign of existing machine, structure, building, etc.; on a new design, not previously made, of machines, structures, buildings, etc., which need not have been built at the time of writing; and on the organizing, developing, and conducting of a welding service. Products covered may be designed either in whole or in part for the use of arc-welding. Preference will be given to papers describing products showing to the fullest the use of the process. The contest does not include discussion of machines which have been designed for welding and sold in the open market, or generally used prior to January 1, 1937. Nevertheless, any preliminary studies, investigations, or laboratory work conducted at any time may be admitted as part of any paper, provided the finished product is not sold on the open market.

Simultaneous with the announcement of the contest is the appearance of the fourth edition of the "Procedure Handbook of Arc Welding, Design and Practice," published by the Lincoln Electric Company, Cleveland, Ohio. Of 802 pages, including graphs and tables, the handbook covers the broad field of arc welding from equipment, ratio of weld, electrode, and speed to cost, through weldability of metals (20 general kinds) to typical applications of arc-welding in manufacture, construction and maintenance. Selling for \$1.50, the book may be had from the Lincoln Electric Company, (DW-AM-381) Cleveland, Ohio.

**VEN-ITE**  
THE MONARCH OF FLOORS



We contract to install guaranteed cement floors anywhere in the Country.

Either your job specifications, or a Ven-ite specification; figured optional with yourselves.

Ven-ite Floors embody several types as follows:

VEN-ITE HEAVY DUTY INDUSTRIAL FLOORS  
VEN-ITE CEMENT FLOORS FOR PUBLIC BUILDINGS  
VEN-ITE COLORED CEMENT FLOORS  
VEN-ITE SURFACED CEMENT FLOORS (TERRAZZO)  
VEN-ITE ACID PROOF FLOORS  
VEN-ITE BLACK TOP FLOORS  
VEN-ITE GRANOLITHIC FLOORS

All work guaranteed against disintegration, dusting, and loose bond.

VEN-ITE COMPANY INCORPORATED  
General offices: 250 S. Broad St., Philadelphia, Pa.  
210 Kinney Bldg., Charlotte, N. C.

**BELMONT IRON WORKS**

PHILADELPHIA NEW YORK EDDYSTONE

Southern Sales Offices, Charlotte, N. C.

*Engineers . Contractors . Exporters*

STRUCTURAL STEEL  
BUILDINGS AND BRIDGES  
RIVETED-ARC WELDED

BELMONT INTERLOCKING  
CHANNEL FLOOR

*Write for Catalogue*

Main Office—Philadelphia, Pa.  
New York Office—44 Whitehall St.

**AUSTIN BROTHERS BRIDGE CO.**

Structural Steel and Ornamental Iron  
Bridges, Reinforcing and Guard Fences

ATLANTA, GEORGIA  
Oakland City Station

**CONVERSE BRIDGE & STEEL CO.**

Chattanooga, Tennessee

Structural Steel for all Industrial Structures,  
Buildings and Bridges.

LARGE STOCK FOR IMMEDIATE SHIPMENT

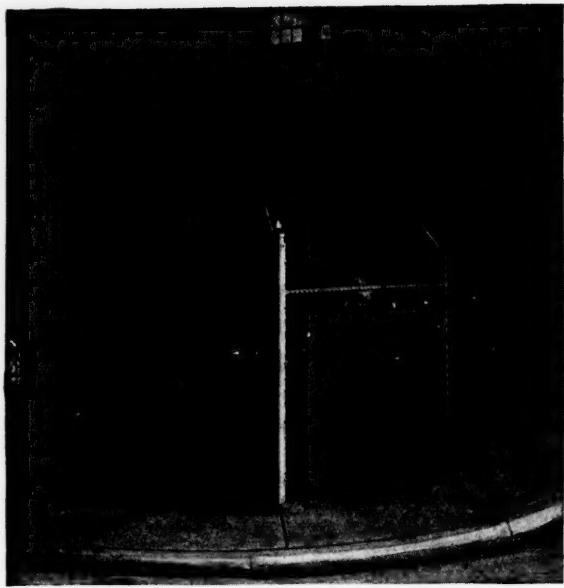
# Northern Hard Rock Maple Flooring

BLOCK

Holt Hardwood Co., Oconto, Wis.

STRIP

MEMBERS OF MAPLE FLOORING MANUFACTURERS ASSOCIATION



## Make Your Plant Safe with the fence that can "stand the rap"

**G**REATER protection for your plant in times of emergency—that's the big reason for investigating Anchor Fences right now!

For Anchor Fences protect employees at work, and provide for better control of traffic in and out of the plant enclosure. At all times they stand guard over plant equipment and raw materials stored outdoors. And to trespassers they say "KEEP OUT" in a way that cannot be ignored.

With an Anchor Fence around your plant you are safe. Production can continue even under adverse circumstances. Disturbances in the neighborhood need cause you no anxiety.

Protect now! Anchor is ready with large stocks of the best protective fence money can buy—and Anchor Sales and Erecting Service is available in every industrial center. Consult "Where to Buy It" in your local classified telephone directory—or mail the coupon for free Industrial Fence Specification book.

# ANCHOR Fences

### —Mail the Coupon Now—

ANCHOR POST FENCE CO.,  
6622 Eastern Avenue, Baltimore, Maryland.

Send me . . . at once . . . your free specification book of  
Anchor Chain Link Fence.

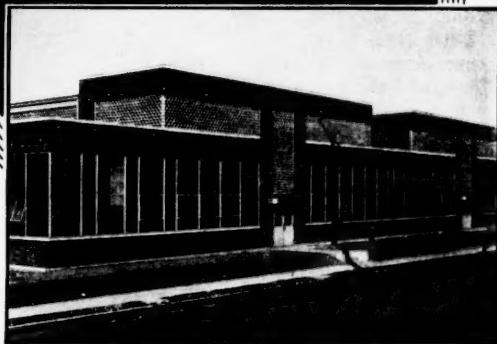
Name.....Position.....

Address.....

Firm.....

APRIL NINETEEN THIRTY-SEVEN

## Ventilate for Efficiency



New plant of Standard Register Co., Dayton, O., ventilated with Heat Valve. The Austin Co., Engineers and Builders.

Summer heat saps vitality—deoxidized air lowers efficiency—both slow up production, increase your costs, and make unsatisfactory working conditions. To get the best from your employees supply them with plenty of fresh air—and make them comfortable in summer heat.

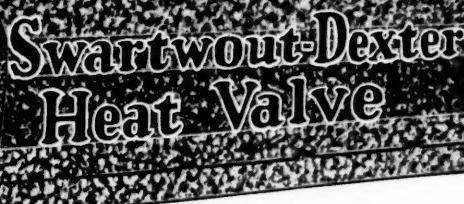
You can do it economically with a Swartwout-Dexter Heat Valve—the modern continuous opening ventilator that supplies "more roof opening per dollar" than heretofore available. It's especially designed for removing excessive heat, smoke, and fumes and for ordinary or special ventilation requirements—is adaptable to all types of buildings and roofs and is inexpensive to install.

Write your nearest office today for data and literature furnished without obligation.

**THE SWARTWOUT COMPANY**  
18619 Euclid Avenue Cleveland, Ohio

### Offices

Atlanta: The Swartwout Co., 1008 Norris Bldg.  
New Orleans: Devlin Bros., 1003 Maritime Bldg.  
Houston: H. T. Riley, Lamar Annex  
Memphis: Tri-State Iron Works, 677 N. Main St.



*The Original (Patented) Continuous Ventilator*

## More Southern Paper Mills Proposed and Under Way

(Continued from page 34)

is now at work on the proposal to build a second newsprint mill in the South. Completion of the first of these will be a definite milestone in an epoch in Southern industrial development, first opened some years ago when Dr. Charles H. Herty, of Savannah, Ga., started his experiments with Southern pine with the aim to utilize it in the manufacture of white paper.

### Ample Pulpwood Supply

This new development, added to the established kraft pulp and paper industry of the South which is now producing more than 1,600,000 tons of paper and board a year, will mean that the Southern States will have a pine pulp and papermaking capacity in the neighborhood of 3,000,000 tons a year. It has dominated the field in the production of pulpwood where the sulphate process is used in its 16 established pulp mills making principally kraft wrapping paper, bags, boxboard and linerboard. The quality of standing timber, estimated at over 250,000,000 cords available for wood pulp, in the South, together with a prospective production and cur-

rent and theoretical future rapid annual growth assure annual cutting of pulpwood for paper of at least 25,000,000 cords a year, which is about double the present annual consumption of pulpwood in the United States. Factors favorable to the South in the location of pulp mills are availability of ample and continuous supply of good pulping cordwood, ample labor, power and fuel, water, chemical supplies and low transportation costs.

### Paper Demand and Prices Advance

Domestic demand for pulp and paper products has been rapidly increasing with an estimated shortage of supply of 250,000 tons this year. In the face of a threatened world shortage of paper in the next two years, the new Southern mills will come into operation under favorable market conditions. Paper prices have been increasing. Production of paper board and boxes has been at practical capacity in recent months. The industry has been discouraging advance commitments. Base price for newsprint is being advanced. Customers of the International Paper Company are being advised of a \$50 per ton base price for newsprint for the first six months of 1938, for delivery at New York, Chicago, and Atlantic and Gulf ports. The base price applying throughout 1937 is \$42.50. Demand is said to be

running more than 10 per cent ahead of last year, which was the largest since the depression. Some foreign markets have been bidding higher than the new base price announced. These factors have stimulated consumers to place orders further ahead than has been the custom.

### Southern Pulp and Paper Articles

The MANUFACTURERS RECORD has published many special articles on Southern pulp and paper resources and development. Back issues are available, as long as the supply lasts, of the following:

**Southern Newsprint—  
Rapid Expansion of Paper Making  
in the South Is a Timely Development  
to Meet Threatened World Shortage of Paper in Next  
Two Years.—March, 1937. Price 50 cents.**

**What's Next for Pulp and Paper?  
—February, 1937. Price 50 cents.**

**Cellulose—The South's New Industrial Star.—December, 1936. Price 50 cents.**

**Southern Paper Development Makes  
Rapid Progress.—October, 1936.  
Price 50 cents.**

**South's Increasing Prominence in  
Pulp and Paper.—October, 1935.  
Price \$1.00.**

## CREOSOTED TIES, PILING, POLES, POSTS, CROSS ARMS, and LUMBER

### WOLMANIZED LUMBER—

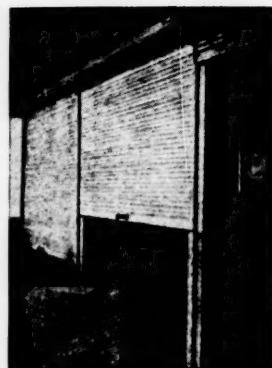
Decay and Termite Proof—Can Be Painted

Docks for Ocean Vessels

American Creosote Works, Inc.  
New Orleans, La.

Atlantic Creosoting Co., Inc.  
Norfolk, Virginia

Plants at: New Orleans; Winnfield, La.; Louisville, Miss.  
Savannah, Ga.; Jackson, Tenn., and Norfolk, Va.



## ROLLING WOOD PARTITIONS

For all purposes: Wherever Division of Rooms is required. Also

VENETIAN BLINDS  
Reliable Material and Low Prices.

SWEDISH  
VENETIAN BLIND CO.  
601 W. 26th St.  
New York  
Branches in Principal Cities

### DEFEAT DRY ROT AND TERMITES

by pressure-treating your lumber and timber with ZMA or Creosote. Eppinger & Russell Co.'s preserving process increases the life of woods from 8 to 20 times. For more than half a century, the outstanding utilities and industrial plants have depended upon Eppinger & Russell Co. for long-life, low-maintenance lumber that is immune to decay, dry rot and termite attack.

PRESSURE-TREATING PLANTS AT:  
Jacksonville, Fla.  
and  
Long Island City, N. Y.

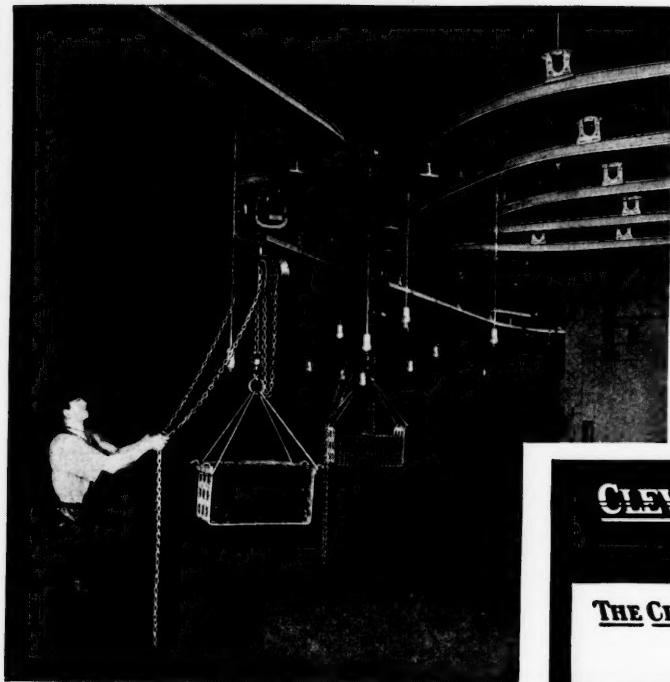
WOOD PRESERVERS  
**EPPINGER & RUSSELL CO.**  
SINCE 1878  
84 Eighth Ave., NEW YORK CITY

## FOR THEIR GREATER SERVICE USE SHIMER SUCCESS PLANING MACHINE KNIVES AND BITS,

Surfacing Knives and many Knives of smaller proportions for special duty in wood cutting. It will be to your advantage to look into this feature of our service. Our prices, too, are very attractive if you take in consideration their extra wear.

Samuel J. Shimer & Sons, Inc.  
MILTON, PA.

## OVERHEAD MATERIALS HANDLING EQUIPMENT



• Cleveland Tramrail helped modernize both the old and the new portions of this plant.

• Obsolete handling methods were replaced by modern Cleveland Tramrail, production speeded up. The "lifts and tugs" (potential cause of loss time injuries) were taken out of materials handling.

Consult your phone directory under Cleveland Tramrail.

**CLEVELAND**  **TRAMRAIL**

DIVISION OF

**THE CLEVELAND CRANE & ENGINEERING CO.**

1145 Depot St.  
WICKLIFFE, OHIO

## FAITHFULLY SERVING FOR YEARS

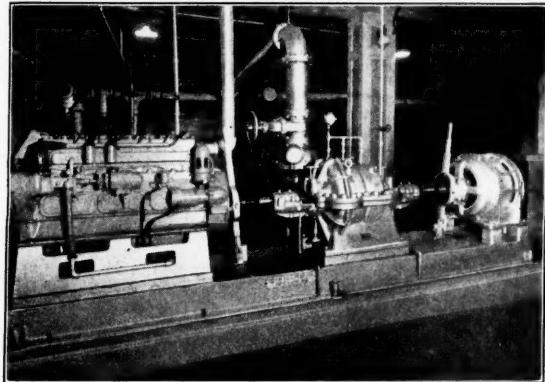
*first, with correct engineering information, second, with reliable power in emergency.*

Sterling  
High  
Duty



Internal  
Combustion  
Engines

Sterling engines are offered with a background of experience, and a record list of successful installations.



A filtration plant at Peru, Ind., employs a Dean-Hill 6" 3 stage centrifugal pump mounted with a Sterling Petrel 6 cylinder 115 HP. engine, and a 75 HP. General Electric motor. Pump capacity 1000 GPM against 180' total head at 1150 RPM. Consulting Engineer, Charles Grossman, Indianapolis, Ind.

## STERLING ENGINE COMPANY

Home Office and Plant  
1270 Niagara St.  
Buffalo, N. Y.

Dept. C-7

Branch Office  
900 Chrysler Bldg.  
New York, N. Y.

## A Short Cut to Dictatorship?

(Continued from page 31)

Supreme Court, Justices who will approve whatever the Congress does, regardless of the Constitution.

"The proposal is clearly an effort to substitute the will of the Congress for the will of the people as expressed in the Constitution of the United States. If the plan is made effective as designed, the most vital and beneficent feature of our system of government will have been changed, not by the people, who alone should make such a change, but by members of the Congress, who certainly have no mandate from the people to do this. It is merely a method by those of our public servants who do not approve of the Constitution as heretofore construed to take a short cut in changing that Constitution. The proposal should be defeated in the public interest."

C. C. SHEPPARD, President & General Manager, Louisiana Central Lumber Co., Clarks, La., (Former President, Southern Pine Association)

"Within the last two weeks I have had occasion to discuss the matter in this section of the country with a lot of citizens, ranging from farmers to lawyers, and I have not yet heard a man express himself in favor of the President's proposal. The dominant thought expressed by these people has been that his proposal would destroy the independence of our judiciary and

that it should be resisted in every honorable way.

"Why all this haste? What is the crisis confronting the country, about which he has expressed such an alarm in his fireside talk? Why did not he meet this question squarely during his last campaign and let the people know what his plans were, both with respect to the court and the matter of additional legislation which he now wants to put through the Congress and have his 'packed' court declare constitutional?"

JOHN E. EDGERTON, President, Southern States Industrial Council, Nashville, Tenn.

"No thoughtful person needs firmer ground upon which to base opposition to the President's plan for the reorganization of the Supreme Court than that indicated by the peerless Washington in his immortal Farewell Address. No man was better qualified by experience, by a broad and deep understanding of government, and by prophetic powers; no man ever knew so well as he the cost of the rights and liberties which we enjoy today, nor their value and the influences which sustain it. His advice, therefore, touching the preservation of our heritage can not and must not be lightly dismissed on the specious presumption that he did not know the condition of our times and so was not competent to pass upon present issues.

"Let us summon George Washington, Chairman of the Constitutional Convention, and the First President of the United States, to appear as a witness before the Senate Judiciary Committee and then let us suppose he stated his

views on the Supreme Court issue in the following:

"Let it be corrected by an amendment in the way which the Constitution designates.—But let there be no change by usurpation; for though this, in one instance, may be the instrument of good, it is the customary weapon by which free governments are destroyed.—The precedent must always greatly overbalance in permanent evil any partial or transient benefit which the use can at any time yield."

"Little else, if anything, needs to be said to answer, adequately to the demands of reason, all that has been said in favor of the most daring proposal ever made to the Congress of the United States. Certainly, the 'nine old men' representing in their personnel every economic view between extreme liberalism and ultra-conservatism can not be held responsible for the fact, if it is a fact, that forty million people in this country are still ill-fed, ill-clothed, and ill-housed even after prosperity is claimed to have been restored. On the contrary, there is a sufficiency of facts to show that if the other two horses of the famous team will pull as well and as nearly in the right direction as the judicial horse has been pulling, through the critical days of the past, the field will be plowed in good time and plowed well. Personally, I would very much rather put my future in the hands of nine well-tried old men than in one young one. If any 'new blood' is needed, let the transfusion be made by the people themselves in the prescribed way, for there is no crisis to justify any extraordinary and unorthodox procedure."



### PRECISION CASTINGS

of

Iron, Brass, Bronze, Aluminum,  
Nickel, Silver.

We solicit your inquiries on difficult  
shapes requiring extreme accuracy

MODERN PATTERN AND MACHINE SHOPS.

THE RICHMOND  
FOUNDRY & MANUFACTURING CO., INC.

RICHMOND, VIRGINIA.

"A Dependable Source of Supply"

### NICKEL-BRONZE

This metal is used on ice cream, dairy, soda bottling, lunch room and other equipment requiring a stainless, highly polished nickel finish without nickel plating.

Just grind, buff and polish and the job is complete. Machines and polishes like brass. Polished sample on request.

### THE GIBSON AND KIRK CO.

Founders of Non-Ferrous Castings  
WARNER & BAYARD STS. BALTIMORE, MD.

Established 1860

### LET US BE YOUR FACTORY

We have plant and equipment for machining parts, building assemblies, complete units and machines.

#### HEAT TREATING AND GRINDING

Let us furnish quotations on your products.

GENERAL MACHINE WORKS  
York, Pa.

### CANNING MACHINERY For Fruits, Vegetables, Seafoods, etc.

WE ARE MANUFACTURERS

— WRITE FOR CATALOG —

A. K. ROBINS & COMPANY, Inc.  
BALTIMORE, MD.

*Is it a question of  
PERFORATIONS?*

If it's a question of perforated sheets in Aluminum, Brass, Copper, Steel, Tin or Zinc, and you are interested in buying the best, getting it at once, and at a reasonable price --- ASK ERDLE TO QUOTE.

Erdle will send samples on request, or if you have a special problem to meet Erdle will offer you the accumulated information resulting from 57 long, full years in the perforating field.

ERDLE PERFORATING CO.  
171 York St. ROCHESTER N.Y.

## PERFORATED METAL

*of every sort*

for Screening, Grading, Ventilating or any industrial purpose. Also Grilles of many beautiful designs.

5631 Fillmore St., Chicago, Ill. New York Office: 114 Liberty St.

**The Harrington & King Co.**  
PERFORATING

## PERFORATED METALS Screens....Grilles

Extensive facilities and long experience make Hendrick the logical source for all perforated metals . . . screen plate with any shape opening, round, square, hexagonal, squareound, slotted, corrugated . . . heating and ventilating grilles of every description. Hendrick can furnish them in any desired commercially-rolled metal.

\*Reg. U. S. Pat. Off.

**HENDRICK MANUFACTURING CO.**  
44 Dundaff Street, Carbondale, Pa.  
Manufacturers of Mitco Open Steel Flooring, Mitco Shur-Site Treads and Mitco Armorgrids.

## McLANAHAN EQUIPMENT

ROCK—SAND—GRAVEL

Single and double roll and jaw crushers, hammer mills, super dry pans, steel log washers and scrubbers, sand drags, revolving and vibrating screens, elevators, conveyors, dryers, jigs, hoists. Complete portable, semi-portable and stationary crushing, screening and washing plants for different capacities of any materials.

**McLanahan & Stone Corporation**  
Established 1835  
Hollidaysburg, Pennsylvania

## LINK-BELT

### CHAINS - SPROCKETS ANTI-FRICTION PILLOW BLOCKS POWER TRANSMISSION EQUIPMENT ELEVATORS AND CONVEYORS

Send for General Catalog No. 600

**LINK-BELT COMPANY**  
Atlanta, 1116 Murphy Ave., S. W.  
Baltimore Dallas New Orleans Offices in Principal Cities

5580-A

1905      *Strand*      1937

## FLEXIBLE SHAFT MACHINES

HIGH QUALITY ONLY  
FOR MANY INDUSTRIES  
 $\frac{1}{8}$  to 2 H.P.  
For  
Grinding—Polishing  
Rotary Filing  
Sanding—Drilling  
Screw Driving  
Nut Setting  
Reaming, Etc.

SEND FOR CATALOG  
**N. A. STRAND & CO.**  
5001 NO. LINCOLN ST., CHICAGO

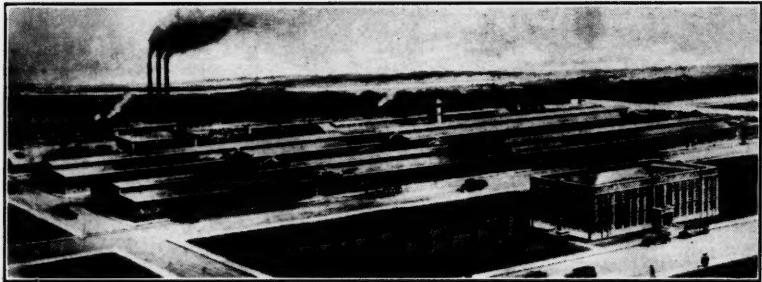
## PERFORATED METALS

We punch and perforate steel, copper, brass, zinc, aluminum, tin and all other metals to meet every requirement.

68 years' experience enables us to give superior service.

Send for catalogue

**Charles Mundt & Sons**  
490 JOHNSTON AVE., JERSEY CITY, N. J.



*The new mechanical rubber goods factory of the General Tire and Rubber Company at Wabash, Ind., is now turning out a great variety of rubber products for the automotive refrigerator industries.*

*Remodeling of the plant formerly occupied by the Service Motor Truck Company and the installation of new machinery have been under way for the past several months. Installation of a complete water supply system to furnish 3,000,000 gallons of water daily, which the plant will require when in full operation, was one of the major improvements.*

*Howard M. Dodge is general manager of the Wabash plant where a wide variety of mechanical rubber goods will be made, assisted by William O'Neil, Jr., eldest son of William O'Neil, president of the General Tire & Rubber Company.*

products, timber and lumber shipped out and petroleum and other products shipped into Central Florida.

The proposed canal has been officially endorsed by the County of Polk; City of Lakeland; City of Mulberry; City of Ft. Meade; Town of Polk City; chambers of commerce of Haines City and Lake Wales; Nathan Mayo, Commissioner of Agriculture of Florida; the Citrus Industry of Polk County and others. It has received the cooperation of leading phosphate companies in the area and the Phosphate Export Association states that it would increase the export of phosphate.

The canal is being directed by officials of Polk County and its leading cities and by a board of directors of business men of the area, including Thomas W. Bryant, chairman, John Ballenger; Dr. Herman Watson; Neil Greening and C. V. McClurg representing Lakeland's two banks; W. F. Cook; Fred Pope; E. E. Kelley; C. I. Dwiggins; Barnwell Fuller; Charles Larsen; A. F. Pickard; Hal Lindsey; Wallace Riggins; Wayne Thomas; E. E. Callaway; Bradford G. Williams; L. E. Detweiler and Dwight Mangum.

## \$9,000,000 Canal Proposed for Central Florida

A DEEP water ship canal from Tampa Bay inland 23 miles along the Alafia River to Lakeland and Mulberry in Polk County, and expansion of aviation facilities of Lakeland's airport are two new projects announced for Central Florida.

E. E. Callaway of Lakeland says a sur-

vey has developed the feasibility of a canal which could be constructed at an estimated cost of \$9,250,000, including boat and rail terminal facilities. In the region of Lakeland 2,000,000 tons of phosphate are shipped annually, over 10,000,000 boxes of citrus fruits, 3,500,000 cases of canned citrus, in addition to other farm

Lakeland has one of the foremost municipal airports equipped for both land and sea planes. In conjunction with Southern College, plans have been made to establish at Lakeland a great aviation school with a number of the world's noted aviators as part of its faculty. Judge Callaway reports that included in the plans is the establishment of a plant for the building of airplanes.

## Aviation Development

**A Complete Line!**

**American-Marsh PUMPS**

★ Centrifugal, Steam and Power Pumps for every application.. Time-Tested Equipment which is Modern in Design, Highly-Efficient in Operation .. Dependable in Service. Write for Bulletins.

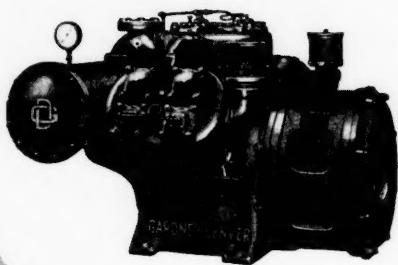
AMERICAN STEAM PUMP COMPANY  
BATTLE CREEK, MICHIGAN ... Pumps and Pumps Only Since 1873

**MACHINE SCREWS  
SQUARE AND HEXAGON NUTS**

Specialists in upset work.  
Write for prices, if special submit samples  
advising as to quantity required.

**THE PROGRESSIVE MANUFACTURING CO.  
TORRINGTON, CONN.**

THE ECONOMICAL WAY  
TO INCREASE YOUR AIR  
SUPPLY.. A GARDNER-DENVER  
"WB" TWO-STAGE COMPRESSOR



Gardner-Denver  
"WB" Two-Stage  
Water-Cooled  
Compressor. These  
compact, space-  
saving compressors  
are available in  
capacities ranging  
from 115 to 360  
cu. ft. per minute  
actual free air de-  
livery at 100 lbs.  
gauge pressure.

Here is an air compressor with  
15% more volumetric efficiency  
than a single-stage compressor of  
the same piston displacement—  
yet with substantial power savings.

Gardner-Denver Class "WB" Two-  
Stage Water-Cooled Compressors  
provide the economical way to in-  
crease your air output. Full details  
are contained in our Bulletin  
WB-10—yours for the asking.

## GARDNER-DENVER COMPANY QUINCY, ILLINOIS

Atlanta, Ga.  
Birmingham, Ala.

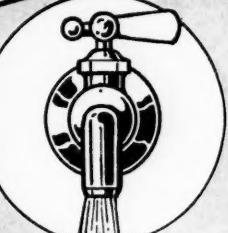
Washington, D. C.  
Knoxville, Tenn.

Houston, Texas  
Dallas, Texas

Since 1859

# GARDNER-DENVER

# MOREWATER



*with*

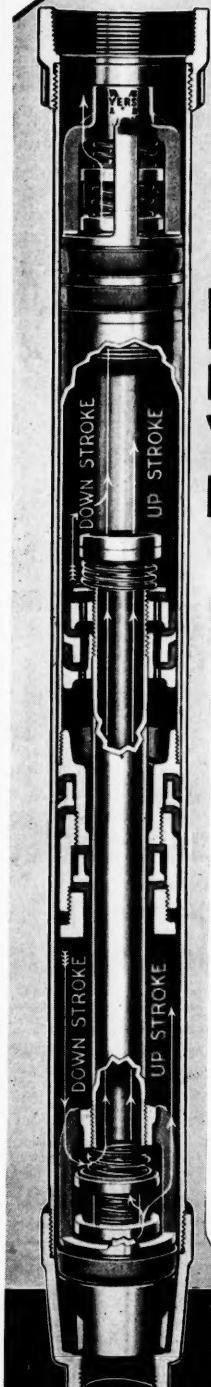
## MYERS DOUBLE ACTING WORKING BARRELS

Frequently, when there is a deep well power pump installation to be made, the question of greater volume than can be pumped by an ordinary single acting cylinder bobs up.

Never permit this problem to distract you for nine times out of ten it can be quickly solved to the entire satisfaction of all concerned by the use of a Myers Double Acting Precision Built Power Cylinder which will actually furnish more water at a lower cost than any similar device on the market.

Now built in both Brass and Brass Lined Styles with size range for almost any requirement, these cylinders with their mechanical perfection and care-free operation afford new standards of water service that will be appreciated by anyone who must go deep for his water supply.

Your inquiry will receive prompt attention.



THE F.E. MYERS & BRO.  
COMPANY  
ASHLAND, OHIO.

PUMPS - WATER SYSTEMS - HAY TOOLS - DOOR HANGERS

## TRADE LITERATURE

### SHEET METAL—

Booklet—"The Path to Sheet Metal Permanence," illustrating and describing many sheet metal applications.

**Republic Steel Corporation**, Cleveland, Ohio.

### WATER SOFTENER—

Bulletin No. 600—illustrating and describing a new two-flow zoilite water softener.

**Elgin Softener Corporation**, Elgin, Ill.

### MOTORBLOWER—

Catalogue—devoted to Single-Stage, Type FS Motorblower, featuring illustrated discussion of the theory of centrifugal air compression to pressures up to 3 pounds, and presenting illustrated section covering seven major fields of Motorblower applications.

**Ingersoll-Rand Company**, 11 Broadway, New York, N. Y.

### PROCESSING EQUIPMENT—

Bulletin No. 103—illustrating and describing Edge Moor Special Fabricated Processing Equipment for chemical plants, oil refineries, dyestuff manufacturers, soap works, dyers and bleachers, paints, varnish and lacquers, food processing, sugar mills, drug makers, paper mills, plastic and resin manufacturers, rubber plants, rayon manufacturers, metallurgical industries, etc.

**Edge Moor Iron Works, Inc.**, Edge Moor, Del.

### ANCHORAGE DEVICES—

Booklet No. 37—devoted to bolt or screw anchoring devices and showing how various types of anchors develop their holding power—advantages of each type, correct way to install them, etc.

**The Rawlplug Company, Inc.**, New York, N. Y.

### LUBRICANTS—

Booklets—Nos. 1, 2 and 3, series "Panorama of Lubrication," presenting non-technical information regarding the manufacture and application of lubricants; No. 1 deals with the "Fundamentals of Lubrication"; No. 2, with "Lubricating Friction Type Bearings," and No. 3, with "Golden Shell—The Modern Motor Oil."

**Shell Petroleum Corporation**, St. Louis, Mo.

### DUPLEX, SELF-OILING PUMPS—

Bulletin No. 6165—devoted to Fairbanks-Morse duplex, self-oiling pumps for handling mud and slush, clear water, petroleum products and other liquids, capacities from 23 to 94 gallons per minute with pressures up to 475 pounds per square inch.

**Fairbanks, Morse & Company**, Chicago, Ill.

### MEASURING INSTRUMENTS—

Catalog EN-96—"Apparatus for Hydrogen-Ion Concentration (pH) Measurements in Laboratory and Plant," listing latest forms of L&N electrodes, potentiometers, a potentiometer-electrometer and galvanometers for research and analytical purposes in the laboratory and for process control in the plant.

**Leeds & Northrup Company**, Philadelphia, Pa.

### WATER POWER MACHINERY, WELDING, ETC.—

Catalog—"Power by Smith," describing and illustrating the application of Smith water power machinery.

Bulletin No. 132—devoted to the highest powered Smith-Kaplan turbines ever built;

Bulletin No. 134—"Welding by Smith," with illustrations showing Smith's facilities for doing unusual welding, a new service now offered to a limited number of companies.

**S. Morgan Smith Company**, York, Pa.

### LUMBER—

Monthly publication containing articles relating to lumber, its uses, preservation, etc.; published by—

**E. L. Bruce Co.**, Memphis, Tenn., manufacturers of hardwood floorings, Southern hardwoods, Bruce preservatives, Termix, Bruce asphalt paints, Bruce floor finishes, and other products.

### PAGE HI-TENSILE F ELECTRODES—

Bulletin No. DH-984—describing in detail shielded arc electrode and shielded arc method of welding, with illustrations showing procedure for various types of welds.

**Page Steel and Wire Division of American Chain & Cable Company, Inc.**, Monessen, Pa.

### BUILDING WIRES AND CABLES—

Bulletin BW-3—illustrating and describing electrical conductors for power and lighting circuits in buildings of every type.

**General Cable Corporation**, New York, N. Y.

### CE RENT-TUBE BOILERS—

Catalog—one of series of equipment catalogs covering extensive line of CE bent-tube boilers, covering cross-sections of typical installations of various types, with descriptive details and illustrations of furnaces and boilers, etc.

**Combustion Engineering Company, Inc.**, New York, N. Y.

### FLUID METERS—

Bulletin 301, "Bailey Fluid Meters for Steam—Liquids—Gases," describing Bailey flow meters and illustrating the manner in which any desired combination of indicating, recording and integrating features may be combined with a flow mechanism suitable for the measurement of steam, liquids or gases under high, low or medium pressures.

**Bailey Meter Company**, Cleveland, Ohio.

### PUMP INDUSTRY STANDARDS—

Book—seventh edition of standards for the pump industry, enlarged edition having been rewritten completely and re-arranged, with the addition of much new material; price \$1.00.

**Hydraulic Institute**, C. H. Rohrbach, Secretary, 90 West Street, New York, N. Y.

### P&H HOISTS—

Bulletin No. H-5—presenting treatment of both general and specific problems in the industrial handling field, with diagrams explaining simplified construction and operation, together with other important points in modern hoist design, illustrated with more than 25 industrial application photographs.

**Harnischfeger Corporation**, Milwaukee, Wis.

### MOTOR CONTROL—

Bulletin No. 67—illustrating and describing EC&M Steel-Clad Motor Control Units and outlining many advantages they offer.

**The Electric Controller and Manufacturing Company**, Cleveland, Ohio.

### TEMPERATURE AND PRESSURE CONTROLLERS—

Catalog No. 900C—devoted to TAG Non-Indicating Temperature and Pressure Controllers, accessories, steam traps, etc., illustrated.

**C. J. Tagliabue Manufacturing Company**, Brooklyn, N. Y.

## JOHNSON WELL SCREENS

Will make better wells because they are tailor-made to fit any kind of sand or gravel formations and to resist the corrosion of any water.

Write for Bulletin M-1033. Contains valuable information about water wells.

Edward E. Johnson, Inc., St. Paul, Minn.

**Pumps—Deep-Well Plunger and Turbine Strainers—and other well supplies**

### WATER PRESSURE SYSTEMS

**A. D. COOK, INC.**

Lawrenceburg, Indiana

## PRESSED METAL ARTICLES

from dies to finished product.

DESIGNING AND DEVELOPING

established 29 years

**PARSONS SPECIALITY & MACHINE WORKS**

PHILADELPHIA

**MANHATTAN PERFORATED METAL CO., INC.**

43 17-37th Street, Long Island City, N. Y.

### PERFORATORS

of All Kinds of Metals for All Industries Write for Copper, Brass, Tin, Zinc or Aluminum Catalog

## EARLE

The Earle Gear & Machine Co.

4719 Stanton Ave., Philadelphia, Pa.

118 State St., Boston, Mass.

149 Broadway, New York City

Cut Spur, Bevel, Herringbone, and Worm Gears

All sizes. Every description. Operating Machines for Bridges, etc.

"Lee Simplex" Cold Metal Shears.

## GEARS

## CLAY WORKING MACHINERY

FOR BRICK, TILE AND BLOCK, FROM SMALLEST TO LARGEST CAPACITY.

Write for information

J. C. STEELE & SONS, STATESVILLE, N. C.

INVESTIGATE THE ECONOMIES AND ADVANTAGES OF—  
**FREDERICK STOKERS**  
 THE FREDERICK IRON & STEEL CO. -:- FREDERICK, MD.  
 ALSO A COMPLETE LINE OF CENTRIFUGAL PUMPS

MANUFACTURERS RECORD FOR



## Could YOU Really

Afford a Loss Like This?

**OF COURSE** THE BUILDINGS ARE INSURED. But who will replace the precious time . . . the wasted business . . . the potential profits . . . that are going up in smoke? Detex DETECTION could have stopped such loss—by making sure the fire was noticed while still controllable.

**NOW IS THE TIME** to guard your plant from the hazards of fire and theft by installing a Detex Watchclock System to check the activities of your watchmen. Firmly rooted in the South with its Atlanta office, Detex offers a nation-wide system of protection, with more than 80,000 Detex Watchclocks in successful use.

**WRITE US TODAY** for information on a thoroughly modern Detex System to fit your specific needs.

**DETEx WATCHCLOCK CORPORATION**

Room 801, 116 Marietta Street, Atlanta, Ga. • 15 Beach Street, Boston, Mass.  
4151 Ravenswood Avenue, Chicago, Ill. 62 Varick Street, New York, N. Y.



MR-4-37

## GALVANIZING

(NOT DIPPED PROCESS)

The largest job galvanizing plant in the United States  
GALVANIZED PRODUCTS FURNISHED

Joseph P. Cattie & Bros., Philadelphia, Pa.

SEWER PIPE  
CULVERT PIPE  
DRAIN TILE  
WALL COPING  
METER BOXES



FLUE LINING  
SEPTIC TANKS  
FIRE BRICK  
GRATE BACKS  
FIRE CLAY

We solicit your inquiries

LEE CLAY PRODUCTS COMPANY  
CLEARFIELD, Rowan County KENTUCKY

FOR ATTRACTIVE BUILDINGS AND MAUSOLEUMS  
**USE BLUE "OGLESBY" GRANITE**

It Assures Greater Permanence—Unusual Beauty  
Reasonable Cost

FOR BUILDINGS  
CUT-ASHLAR RUBBLE

FOR MONUMENTS—  
MARKERS—MAUSOLEUMS

Quarried by—

OGLESBY GRANITE QUARRIES, ELBERTON, GA.  
"Preferred for Better Memorials since 1893."



MOUNT AIRY GRANITE

For Better  
Buildings and Memorials

NORTH CAROLINA GRANITE CORP.  
Mount Airy, N. C.

## THE LOCOMOTIVE TRANSMISSION



ORIGINATED  
BY

## WHITCOMB

- An important part of a locomotive is the transmission. It gears the power to the load, and must be strong enough to carry the full engine torque at rated speeds.

- The standard Whitcomb, selective-gear type transmission, providing four speeds in either direction, was originally designed by The Whitcomb Company, and has been accepted as the standard design for all heavy-duty, internal-combustion locomotives. It delivers a larger proportion of the engine power to the rails and contributes to economical operation.

- In larger sizes, the gears are constantly in mesh. Engagement is effected by stepped jaws in the faces of gear hubs. All gears, sprockets and shafting are alloy steel. The heavy-duty roller chains are made of alloy steel. Shims in journal boxes provide for take-up. Bearings are heavy-duty ball or roller type.

### A SIZE AND TYPE TO SUIT YOUR NEEDS

Gasoline or Diesel Mechanical Drive

Gasoline or Diesel Electric Drive

Electric Storage Battery

Electric Trolley

Combination Trolley—Storage Battery

Whitcomb Engineers will survey your requirements and estimate the savings you can make by investing in Whitcomb equipment.

### THE WHITCOMB LOCOMOTIVE CO.

Subsidiary of The Baldwin Locomotive Works  
Plant at Rochelle, Illinois. All sales made by The Baldwin Locomotive Works, Paschal Station Post Office, Philadelphia, Pennsylvania.

**WHITCOMB LOCOMOTIVES**

